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ABSTRACT

A project was conducted to develop a workshop designed to improve the vocational guidance programs and services for hearing-impaired students in the secondary school setting. This goal was accomplished by developing an in-service training program to provide school personnel with increased awareness of the unique learning concerns of hearing-impaired students in the classroom. Major project activities included a needs assessment to identify the special learning concerns and vocational counseling needs of hearing-impaired students. Following the needs assessment, training modules were developed to make school counselors and occupational specialists aware of hearing-impaired students' vocational needs. Additional components were designed to provide counselors with skills to more effectively meet these needs. Evaluation of the workshop format and associated components was accomplished by field testing in four separate sessions. Results indicated that participants were highly positive toward all evaluation issues. (Appended material includes the teacher in-service component, participant response data charts, workshop format, participant workbook, and the slide/tape script.) (LRA)

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ED195856

MEETING THE VOCATIONAL NEEDS OF HEARING IMPAIRED STUDENTS

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October 10, 1978 - September 1, 1979
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NATIONAL INSTITUTE OF EDUCATION

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TABLE OF CONTENTS

Page

Project Personnel. 1

Nature of the Project. 2

Literature Review. 3

Need for the Project. 5

Purpose. 6

Specific Objectives. 7

Procedure for Accomplishing Project Objectives. 7

Evaluation. 9

Participants' Comments. 11

Dissemination of Products. 14

References. 16

Appendix. . . . .

A. Teacher In-Service Component. 17
B. Participant Response Data Charts. 20
C. Participant Comments by Item. 26
D. Workshop Format. 33
E. Participant Workbook. 43
F. Slide/Tape Script. 70

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NATURE OF THE PROJECT

A hearing impairment can cause many social, emotional and psychological problems. The nature of these problems can and does become quite severe as a hearing impaired student prepares to enter the world of work. The attitudes of others and their lack of knowledge about deafness often prevent handicapped youngsters from maximizing their learning experiences in the secondary school setting.

Many hearing impaired students are being mainstreamed into "regular" hearing classrooms. The majority of teachers and counselors working in these environments have had little or no previous experience in working with the deaf. There is an urgent need for both teachers and counselors to become aware of the unique problems in communication and the impact of these problems on the deaf individual. It is essential that counselors and teachers have information available to them that will increase their knowledge about impairments and the effect of these impairments on the employability skills of deaf students. Increased awareness on the part of secondary school personnel regarding the specific needs of impaired students will increase the effectiveness of the students' educational experience. This increase will be stimulated by a faculty that is better equipped to present the handicapped students with curriculum materials and processes more suited to their special population needs. The end result will be students who are more competently suited to enter either the world of work or seek higher education.

LITERATURE REVIEW

The area of counseling hearing impaired individuals is still in its early developmental stages, lagging far behind the general field of counseling, and to an uncomfortable extent, often removed from interaction with parent discipline (Sussman and Stewart, 1971).

Counseling with the deaf has received very little attention in counseling literature. Prior to 1970 there had been no research on the relationship, the process, or the outcome of individual or group counseling with hearing impaired clients (Stewart, 1970).

Sussman and Stewart (1971) report that counseling with the hearing impaired has remained, up to the present time, a relatively unexplored area because of the small number of counselors and because few practicing counselors have reported on their experiences with the deaf. The research that has been reported has involved primarily deaf inpatients in mental hospitals. Thus, there is relatively little information of which counseling approaches can be used with hearing impaired clients.

There are approximately 1.3 million profoundly deaf individuals in the country and approximately 13 million hearing impaired individuals. With very few exceptions, there has been virtually no development of mental health resources for these handicapped people (Hersch and Solomon, 1973).

Curtis (1976) studied the need for counseling services in schools for the deaf and disclosed a recognized need and much support for these services. She recommended that counseling services be provided for all deaf students as it is beneficial in promoting

the development of growth of personal and social skills. It is almost impossible to discuss the nature of counseling programs in the public schools since such programs are virtually nonexistent (Lloyd, 1972).

It is the present trend to integrate hearing impaired students into schools for the hearing. Some students are not adjusting emotionally. Their problems have been diagnosed as "situational maladjustment". There are feelings of isolation and inferiority. These students are continuously enduring extremely stressful situations and feel very frustrated and helpless (Sussman, 1979).

Hearing impaired students are restricted to more visual clues, and they tend to enter fewer group settings. They must often hang back and analyze a social situation without benefit of explanation (Mindel and McKay, 1971).

Counselors working with the hearing impaired client must:1) understand certain facts about deaf people; 2) be aware of the special problems experienced by the deaf; 3) know the impact of these problems so that their impact on the counseling relationship may be minimized; 4) be able to communicate in sign language, if necessary; and 5) be aware of the ways hearing impaired clients can be helped to better express themselves (Sussman and Stewart, 1971).

One of the primary prerequisites of good counseling is good communication. This implies much more than a mere exchange of words between two individuals. Counseling, to be effective and beneficial to the client, must involve a true sharing of thoughts, ideas and feelings. Unfortunately, this type of counseling is rarely avail-

able to deaf people (Bolton, 1976).

There are specific strategies which the counselor can use in meeting the communication needs of his hearing impaired clients. In determining which method of communication is best suited for a particular person, the counselor must keep in mind that the client should have the right to suggest the method to be used, and the method may vary with an individual depending on the particular situation (Bolton, 1976).

Along with the difficulty in communicating with the hearing impaired, there are two aspects of attitude towards deafness that are potentially detrimental: actual attitudes held by hearing persons and the perceived attitudes that hearing impaired persons believe hearing persons hold. These "actual" attitudes may result in barriers in education and employment, while "perceived" attitudes influence the hearing impaired individual's motivation and self-worth (Bolton, 1976).

It was the primary intention of this project to address issues of communication with hearing impaired students in the secondary school setting. In addition to this main purpose, attitudes toward hearing impaired individuals were explored and dealt with in a constructive manner. These two main objectives were accomplished within the framework of an experiential in-service component (Appendix A) that was developed as part of this project.

NEED FOR THE PROJECT

The current trend in education is to place students considered

to be members of special populations into "regular" classrooms within the schools. The various merits and drawbacks of a totally heterogeneous learning environment have been discussed in numerous studies. It is not within the scope of this proposal to confirm or refute the benefits of mainstreaming. As special population students enter the classroom, one fact remains reasonably consistent. Few regular classroom teachers have had special training in adapting their instructional methods to the unique concerns of these students. The assumption is made that without adaptive teaching strategies, these students will have added difficulties in maximizing their educational opportunities. A loss in the effectiveness of the education received by a special population student serves to add another significant barrier to their achievement of a fully functioning life style. In addition to their handicap, these students are now burdened with less than desirable employability skills.

PURPOSE

The purpose of this project was to develop a workshop designed to improve the vocational guidance programs and services for hearing impaired students in the secondary school setting. This goal was accomplished by developing an in-service training program to provide school personnel with increased awareness of the unique learning concerns of hearing impaired students in the classroom. The in-service program also addressed the specific vocational needs of these students. It is believed that through increased sensi-

tivity to these issues, school personnel can more appropriately address the needs of hearing impaired students at the high school level. The program was designed for guidance counselors and occupational specialists to present to their school's faculty following their initial training session.

SPECIFIC OBJECTIVES

The specific objectives of this proposal were as follows:

a. Identify the special learning concerns of hearing impaired students.

b. Identify the special vocational counseling needs of hearing impaired students.

c. Heighten the awareness of guidance counselors and occupational specialists in relation to deafness and the unique communication problems that accompany them in the world of work.

d. Provide guidance counselors and occupational specialists with a training module to use in sensitizing teachers to the unique needs of deaf students.

PROCEDURE FOR ACCOMPLISHING PROJECT OBJECTIVES

The special learning concerns and vocational counseling needs of hearing impaired students were identified in the following manner:

a. Extensive literature review.

b. Site visitations to schools and special programs for hearing impaired students in Central Florida to gather data on current programming.

c. Consultation with speech and hearing experts in the Central Florida area.

Following the needs assessment and identification of existing programs, the project personnel turned their attention to the development of the in-service training component for counselors. The training modules were designed to make school counselors and occupational specialists aware of hearing impaired students' vocational needs. Additional components were designed to provide counselors with skills to more effectively meet these needs. The in-service components were designed to enable counselors to present the in-service workshop for their own school's faculty. These faculty presentations will aid teachers in more effectively dealing with hearing impaired students in their classrooms. The in-service components consist of the following items:

a. Slide/tape presentation: consisting of numerous slides and cassette tapes dealing with factual information about hearing loss, learning implications of hearing impairment, vocational implications, testing implications and methods of communication.

b. Video-tape: demonstrating deaf clients in learning situations and in groups discussing counseling and vocational needs.

c. Cassette tapes with "deaf speech" for the participants of the workshop to listen to and rate their

intelligibility.

d. Mimeographed information and worksheets: to supply information for the participants on fingerspelling, diagrams, methods of communication, and suggestions for meeting hearing impaired students' vocational concerns.

The fully developed training package is experiential in nature, enabling counselors to more fully understand the needs of hearing impaired high school students. The materials enable counselors to educate teachers in their home schools regarding these students' educational and vocational needs. This increased awareness is expected to provide a more meaningful learning experience for these handicapped students, leading to more successful career decision-making on their part.

EVALUATION

The workshop was field tested with counselors, occupational specialists, and teachers of the deaf from various educational levels and locations in Central Florida. The workshop format and associated media components were field tested in four separate sessions, involving five counties. The first workshop was conducted in Brevard (May 16, 1979) and the second in Volusia (May 18, 1979). The third session was conducted in Lake County (May 25, 1979) and the final workshop was held at the University of Central Florida (May 30, 1979). The final presentation included educators from Orange and Seminole Counties.

At the end of each session, an evaluation form (ref. workbook, Appendix E) was distributed to the participants in which their understanding and reactions to the program were recorded. Forty-two participants turned in surveys on the workshop. Five participants over the four presentations left prior to the workshop's completion without handing in their surveys. Therefore, a total of 47 educators participated in the workshops. Data collected during field testing was compiled and necessary changes in the project were made based on participant feedback.

Participant responses to a Likert-type format were compiled by item. Analysis was done on each workshop presentation. The data across all presentations was also tabulated to provide a total participant response to the workshop content and format. A review of the percentage distribution by item (ref. Appendix B) indicates highly positive response to all evaluation issues. The following table represents the percentage distribution of all participant responses to each issue:

PARTICIPANTS' COMMENTS

ITEM	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
1. Well planned and well organized	85	15			
2. Objectives clearly stated	76	24			
3. Appropriate use of facilitators	83	17			
4. Interesting and helpful media components	67	31	2		
5. Effective experiential activities	78	20	2		
6. Helpful instructions provided	69	31			
7. Interesting topical discussion	85	15			
8. Increased knowledge of hearing loss	78	17	5		
9. Increased understanding of hearing impaired student needs	79	18	3		
10. Increased awareness of student vocational needs	68	30	2		
11. Increased interest in my seeking further skills	67	26	7		
12. Take-home materials will be helpful in the future	79	21			
13. Overall, the workshop was a valuable experience	95	5			

The data indicates that participants viewed the workshop in highly positive terms, with 95% of those in attendance strongly agreeing that the workshop was a valuable experience. The responses, although very supportive of the workshop, point to a number of issues for further discussion. Items four, six, ten and eleven will be individually discussed based on the fact that these items received less than a 70% participant response rate for the strongly agree choice. Item eight will receive individual attention because 5% of the respondants recorded a neutral reaction to the statement.

Item four sought to elicit participant reaction to the value of the workshop's media components. While 67% strongly agreed that the media products were interesting and helpful, 31% responded with agree and 2% were neutral. Narrative statements made in the additional comments portion (item fourteen) provided specific input to this item. Remarks were made about various sections of the slide/tape progressing too swiftly, with too much information provided in a short period of time (ref. Appendix B). In an effort to respond to this feedback, the following modifications were made in the slide/tape components:

1. The rate of presenting content information was decreased.
2. Printed graphics of basic information were added to provide participants visual exposure simultaneously with the audio input.

Number six attempted to get participants' opinions of the quality of instruction provided by the facilitators as each unit was introduced. All participants were either in agreement or strongly agreed

that the instruction provided was helpful. The 31% response rate in the agree category indicates room for improvement in this area. Suggested areas of improvement follow:

1. Provide a more specific statement of objectives at the beginning of each individual component.
2. Incorporate specific school related counseling situations dealing with hearing impaired students and specific vocational needs.

Item eight was designed to obtain the degree of increased knowledge regarding hearing impairments. Five percent of the participants marked the neutral option. A number of audiologists and teachers of the deaf attended the workshops. The intention of the workshop was to provide basic information and teaching communication strategies to school personnel with little or no knowledge of hearing impairments. As a result, much of the information presented was expected to be common knowledge to professionals in the field of deaf education.

Number ten sought information about increased awareness of the hearing impaired student's vocational needs. While 68% of the participants responded "strongly agree", 30% responded "agree". This rate was somewhat disheartening to the program developers because the area of vocational needs was one of the project's major objectives. However, it was believed that prior to dealing with the vocational needs of students, a basic understanding of the etiology of hearing impairments must be developed. Following an increased awareness of cause/effect issues, strategies for more effective communication and instruction must be presented in order to insure

transmittance of data to the student. Only after these necessary components were dealt with, was it believed appropriate to explore the area of vocational needs. As a result, participants may have felt that the area of vocational needs was not completely explored.

It is the opinion of the project developers that information gains in the other content areas were essential to the overall effectiveness of the workshop. Participants who came to this learning experience expecting to focus exclusively on vocational aspects of a hearing impairment may not have had their prior expectations met to the fullest.

Item eleven was another area with a positive, yet somewhat disappointing, distribution. A fairly high percentage (67%) of the participants strongly agreed that they were interested in seeking further information and skills for working with hearing impaired students. However, 26% only agreed and 7% were neutral. It is believed that the primary factors here are: 1) many school personnel would find it difficult to add additional time demands to already overloaded schedules; and 2) those participants in attendance with expertise in the field of deaf education feel satisfied with their level of expertise in the area.

In conclusion, overall response to the workshop format and materials was extremely positive with 95% of those in attendance strongly agreeing that the workshop was a valuable experience.

DISSEMINATION OF PRODUCTS

Copies of printed materials were sent to all Florida county

school superintendents. All State University System counselor education programs received complete program packages. The associated audio/visual products are available at cost on request for interested school districts, universities and programs. The Florida Department of Education, Division of Vocational Education received one complete copy of all program materials.

All media components of the program are available through the University of Central Florida. For information regarding cost and shipping, address inquiries to:

Director
Instructional Resources
Library, Suite 139
University of Central Florida
P.O. Box 25000
Orlando, FL 32816

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APPENDIX A

TEACHER IN-SERVICE COMPONENT

COMPONENT NUMBER:

TITLE: Career Counseling With Hearing Impaired High School Students.

SCHOOL/SPONSOR:

CLASSIFICATION:

NUMBER OF POINTS:

GENERAL OBJECTIVES: This component is designed to provide counselors and occupational specialists with an understanding of hearing impairments. Participants will learn about the special needs of hearing impaired students regarding learning problems and career planning concerns. The implications of P.L. 94-142 for hearing impaired students will also be discussed.

NOTE: P.L. 94-142 is expected to have a significant impact on counselors and occupational specialists. A larger number of special population students will be entering the public school system and mainstreamed into regular classes.

SPECIFIC OBJECTIVES: The workshop will focus on the following areas:

1. Participants will be able to describe the physical aspects of hearing impairments.
2. Participants will be able to distinguish between the reality and stereotypical myths about hearing loss.
3. Participants will be able to explain special learning problems related to hearing impairments.
4. Participants will be able to demonstrate basic communication skills needed to effectively communicate with hearing impaired students.
5. Participants will be able to recognize appropriate vocational opportunities for hearing impaired students.
6. Participants will be able to identify specific aspects of P.L. 94-142 that relate to the placement of hearing impaired students in regular classrooms.

DESCRIPTION: The six-hour in-service component will be presented in an experiential format and includes the following items:

1. Slide/tape presentation: consisting of numerous slides and one cassette tape dealing with factual information about hearing loss, vocational placement and learning problems experienced, methods of communication.
2. Video-tapes: demonstrating deaf clients in counseling situations and in groups discussing counseling and vocational needs.
3. Cassette tapes with "deaf speech" for the participants of the workshop to listen to and rate their intelligibility.

4. Mimeographed information and worksheets to include information on signing and fingerspelling, diagrams, methods of communication, and suggestions for meeting hearing impaired student's vocational concerns and special learning problems.

EVALUATION: A response questionnaire will be distributed to the participants on which their understanding and reactions will be recorded.

PERSON RESPONSIBLE FOR EVALUATION: Dr. Raphael R. Kavanaugh
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Orlando, Florida 32816
305-275-2426

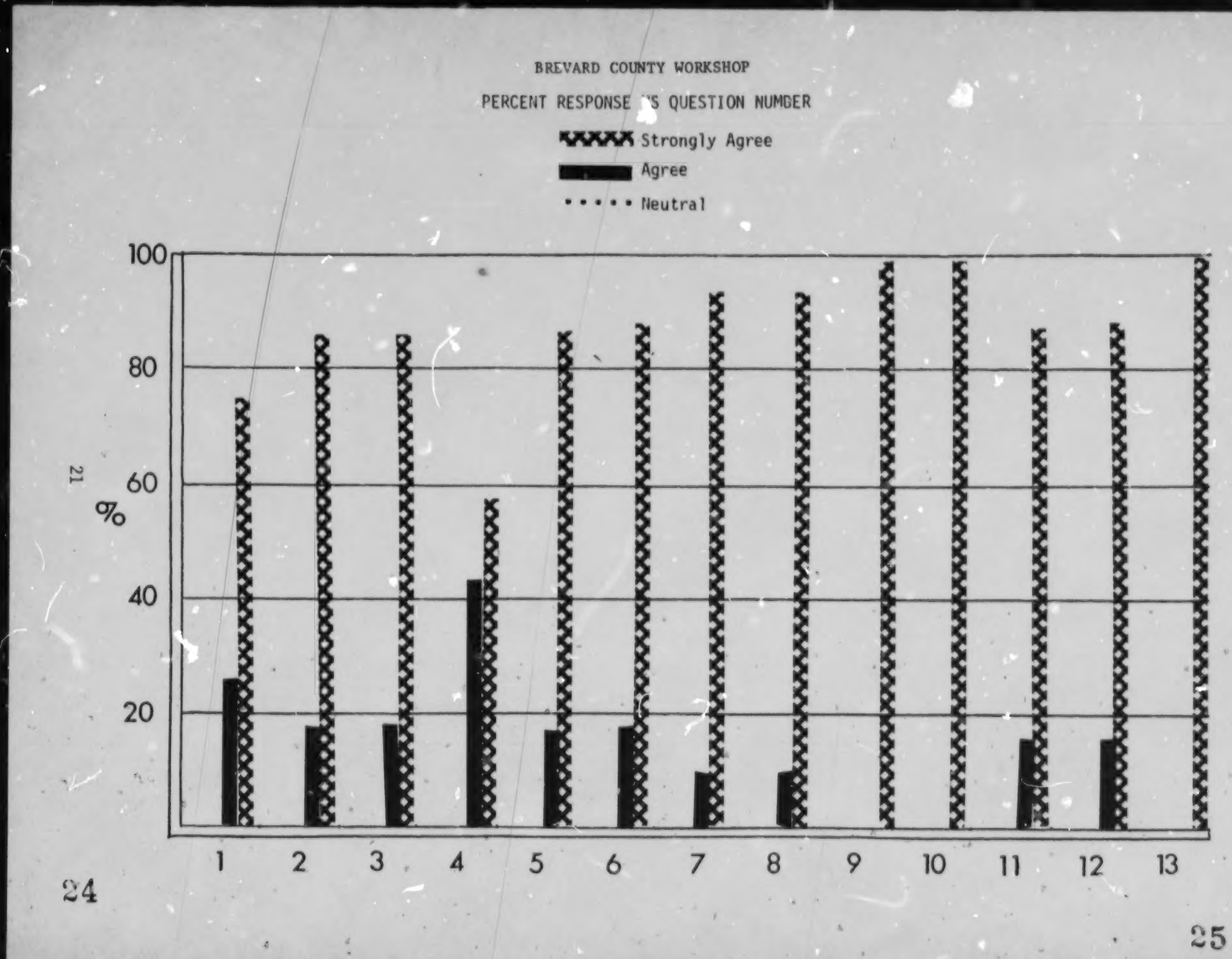
TENTATIVE DATES:

TENTATIVE LOCATION:

ESTIMATED NUMBER TO BE INVOLVED:

APPENDIX B

PARTICIPANT RESPONSE DATA CHARTS

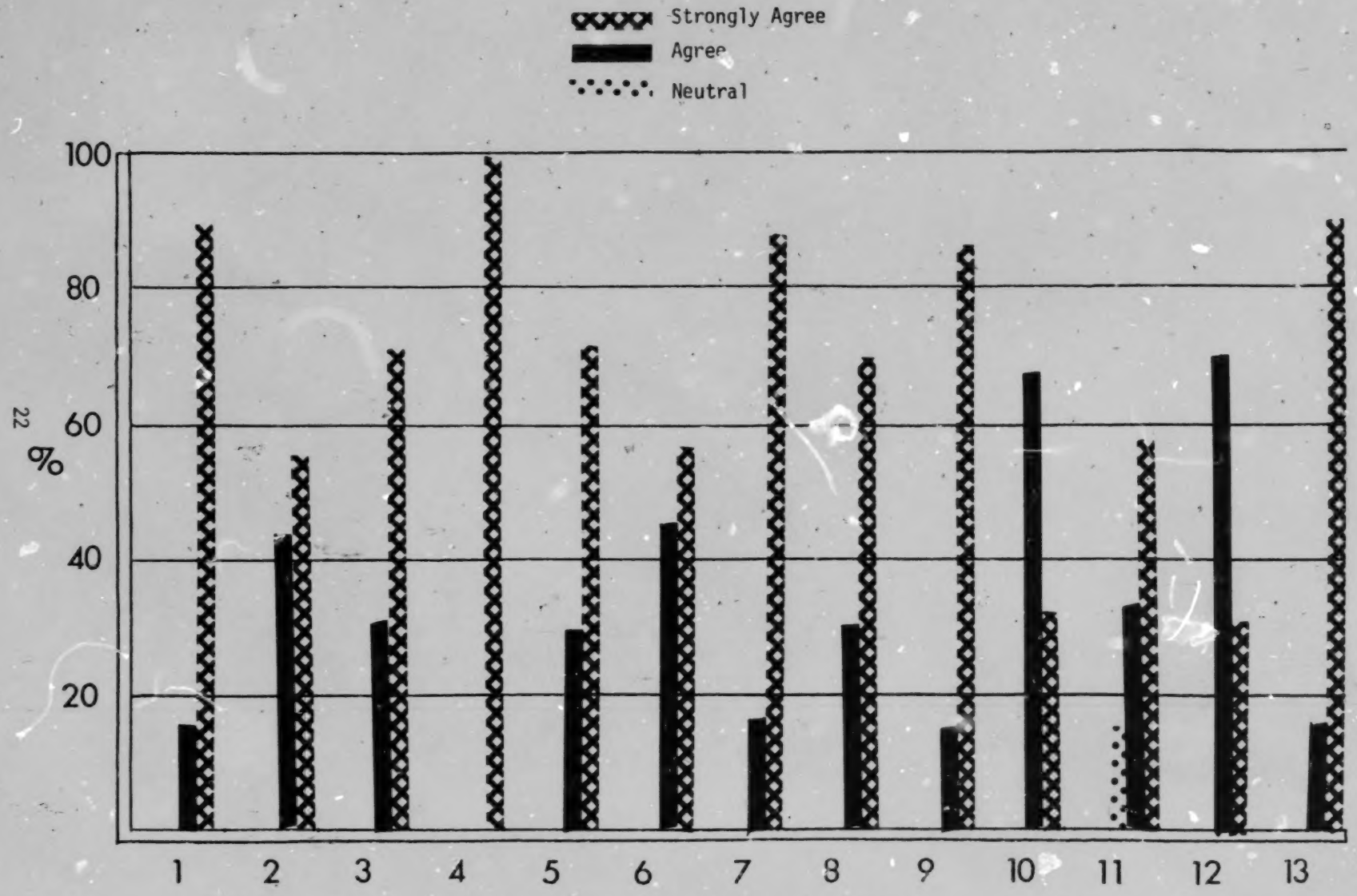

BREVARD COUNTY WORKSHOP
PERCENT RESPONSE VS QUESTION NUMBER
Strongly Agree
Agree
Neutral
100
80
60
40
20
%
1
2
3
4
5
6
7
8
9
10
11
12
13

24

25

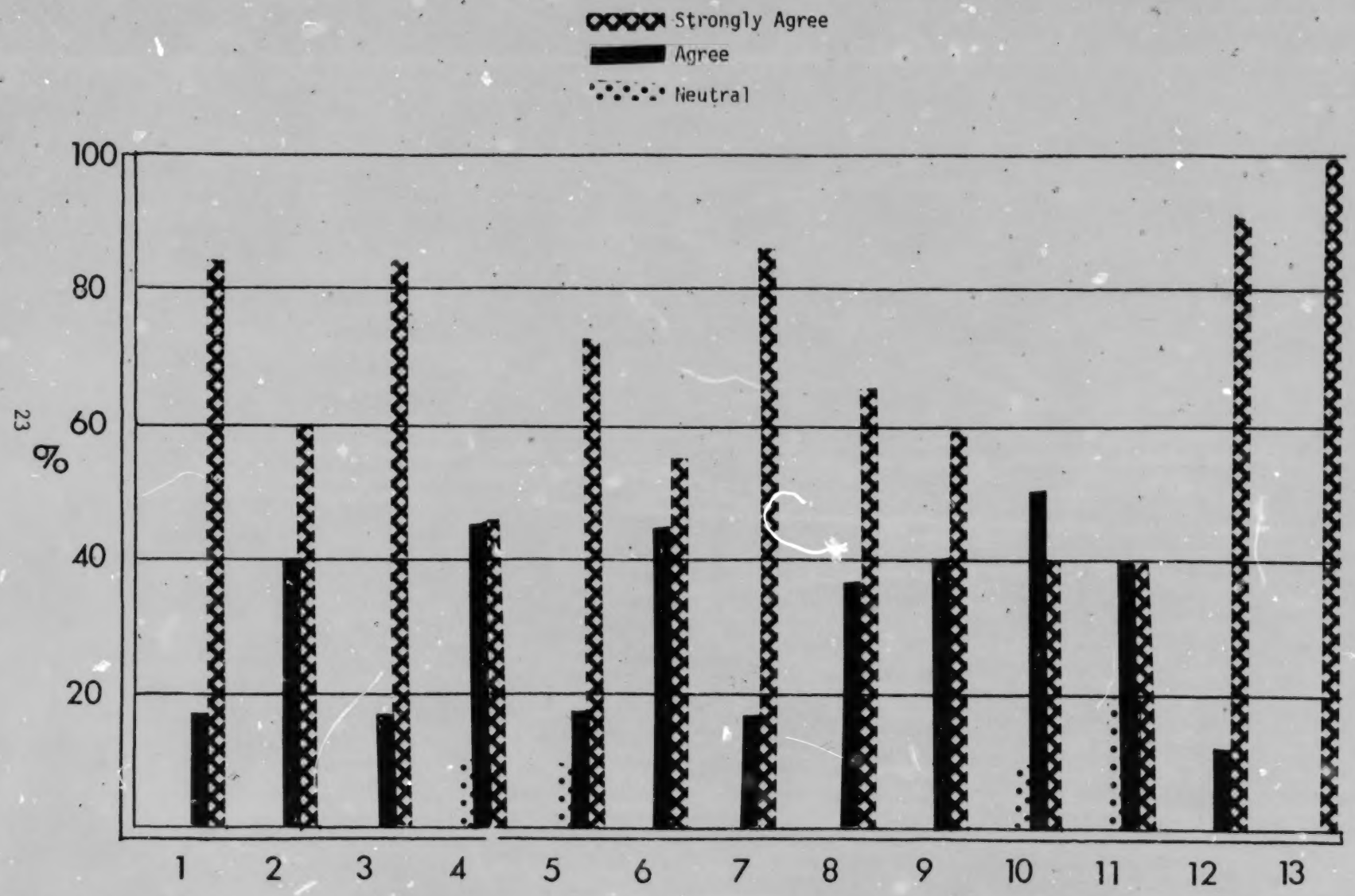
VOLUSIA COUNTY WORKSHOP

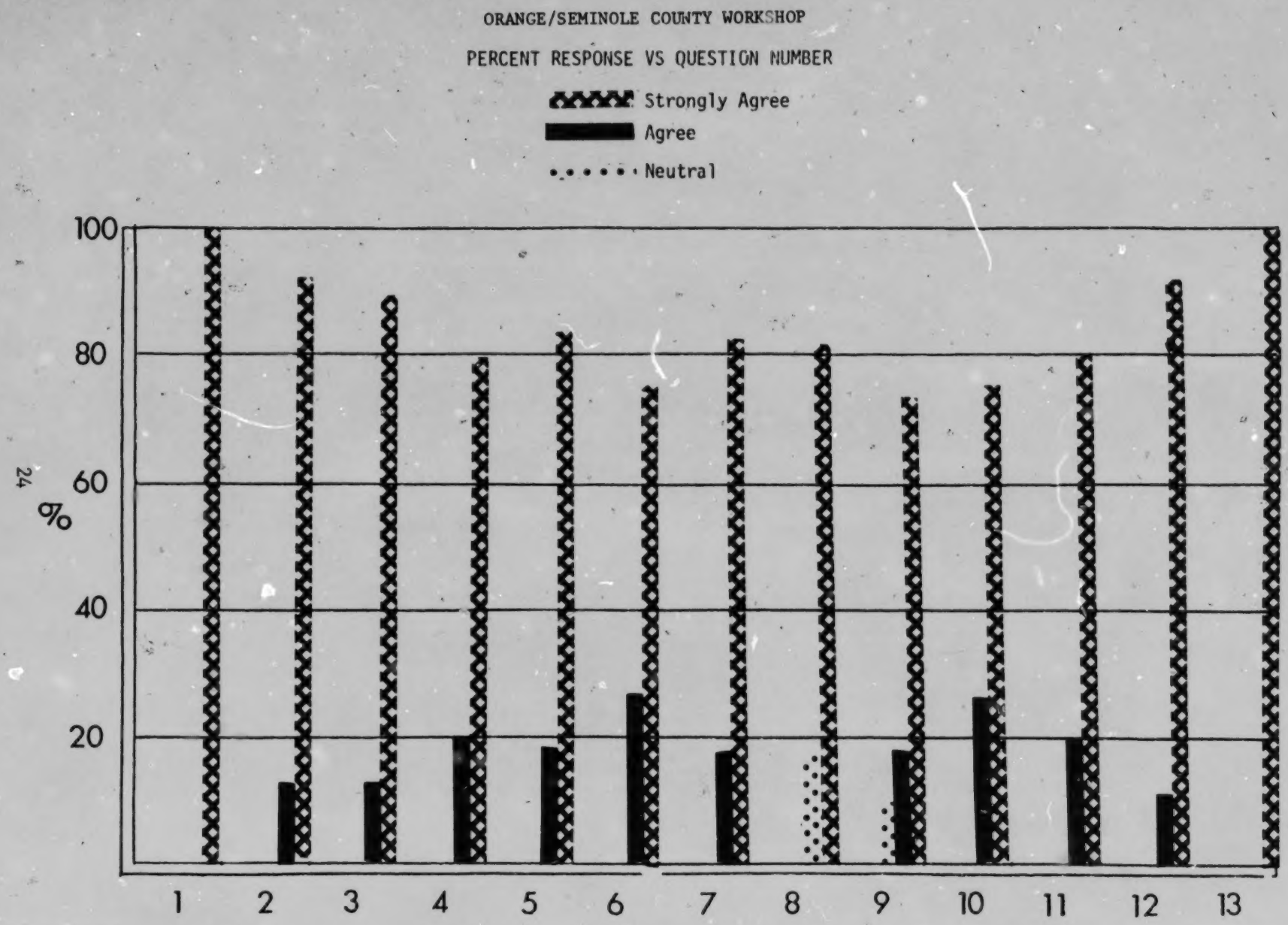
PERCENT RESPONSE VS QUESTION NUMBER



LAKE COUNTY WORKSHOP

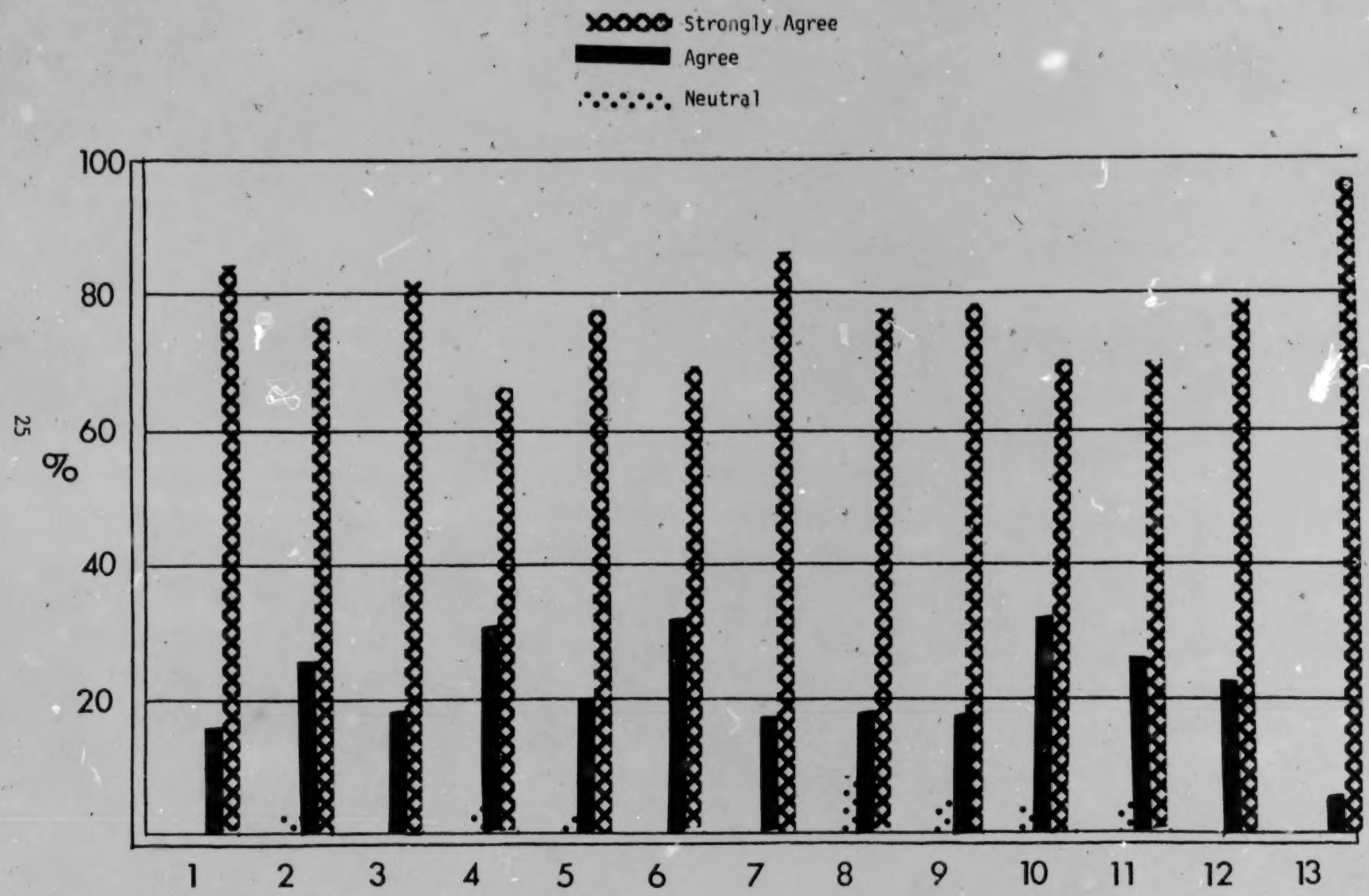
PERCENT RESPONSE VS QUESTION NUMBER




ORANGE/SEMINOLE COUNTY WORKSHOP
PERCENT RESPONSE VS QUESTION NUMBER
Strongly Agree
Agree
Neutral
100
80
60
40
20
%
1
2
3
4
5
6
7
8
9
10
11
12
13

TOTAL WORKSHOP

PERCENT RESPONSE VS QUESTION NUMBER



APPENDIX C

PARTICIPANT COMMENTS BY ITEM

Participant Comments by Item

1. The workshop was well planned and well organized.

   . I liked the fact that there were activities interspersed throughout. It kept things moving.

   . Good diversification of audio/visual - kept attention.

   . Perfect - not too long, not too short.

   . Variety of activities; very good; well timed.

   . The informal approach was pleasant.

   . Overall good - needs a few improvements which will come with experience.

   . Some work still needs to be done in smoothing the transitions.

   . The group worked well with the staff to make it easier.

   . Was well planned, perhaps at first moved a little too fast.

2. The workshop objectives were clear.

   . Could be explained more in detail.

   . Repetition of the objectives and perhaps a summation of major points at conclusion might be worthwhile.

   . Especially the objective of understanding the impaired individual.

3. The use of workshop facilitators was appropriate.

   . Nice how everyone interacted.

   . Well selected.

   . Don't understand this statement.

   . Highly informed and informative.

   . All did o.k.

   . The most was made from what was on hand.

   . Nice variety - more than 1 leader - attention getting/keeping.

4. The component overviews (Slide/tapes) were interesting and helpful.

   . Tapes needed to be slowed down as far as speaking rate is concerned.

   . We just felt the speaking was a bit fast.

   . Too fast of presentation.

- Showed a student wearing a behind the ear aid and were talking about in the ear. Also showed a conductive loss wearing a body aid.
- Some slides don't agree with text of tape.
- Could move slower and sound could be cut down and slowed.
- Effectively used.
- At times a bit repetitious.
- Excellent quality - visually and auditorily.
- Especially video tape of classroom situation.
- Needs work.
- Good clear viewing and excellent instructions.
- Interesting but as stated before, moved fast at first.

5. The activity groups helped clarify my thinking.
   - Provided a good experience.
   - A group activity involving the family unit would be interesting.
   - Fun activities.
   - Yes.
   - To a high degree.
   - They helped the most.
   - Very good.
   - Very definitely.
   - Groups were a little too small, I thought.
   - The participation of the group was one of the highlights.
   - And permitted group interaction; good activites.
   - Yes, quite helpful.
6. The instruction directed by the facilitators helped introduce each unit.
   - There were 3 mistakes when labeling the parts of the ear.
   - This was well done, I thought.
   - Comments made during the conference should assist in improving the presentation prepared for finished product.

- Couldn't have been better.
- A little vague, but comprehensible.

7. I found the topical discussions interesting.
   - Brought a good many new concepts.
   - I learned a lot of things that I didn't know.

8. I know more about hearing impairments because of this workshop.
   - I knew it already but it was presented clearly.
   - Well....I always want to know more.
   - Very definitely!
   - Definitely informative and made me aware of their problems which we take for granted.
   - I hadn't thought about some things until today.
   - A lot more!
   - Which will be helpful to me on the job.
   - I'd like to attend more of these whenever possible.
   - Re: vocational education.
   - A lot of areas I was not aware of.

9. I have a better understanding of the needs of hearing impaired students because of this workshop.
   - Yes! Yes!
   - Enlightening.
   - I have been enlightened!
   - Several good specific and matched points were made.
   - If I ever run across this type of situation, I'd feel more at ease because of the workshop.
   - Yes but only broad but vague.

10. This workshop has increased my awareness of the vocational needs of the hearing impaired students.
    - More information on job awareness activities needed for counselors?
    - Could be stressed more and other agencies brought in.

- Very much so.
- Would like to attend a series of these types.
- Had fair idea of this already.
- No doubt.

11. I am interested in seeking further information and skills in dealing with the needs of the hearing impaired student.

- Would like to have this workshop for Volusia County Elementary Counselors next October - will contact.
- Would like to take a sign language course.
- Yes! Would like to attend a series of these types.
- Believe this stimulated my interest in acquiring more knowledge in this area.
- If time permits, I'd like to get more involved.
- Yes, there are a lot of aspects, especially emotional, that I would like to know.

12. The materials provided will prove helpful to me in the future.

- I'll share info.
- Haven't looked them over yet - I certainly imagine they will be helpful.
- I needed this awareness in working with my clients.
- Some of the best I've run across.

13. Overall, I found the workshop a valuable experience.

- Teachers should be involved.
- I would like to have a follow up workshop involving employment opportunities and needs.
- Definitely.
- Will prove very helpful in the future.
- Glad I came. Thanks.
- I think everyone else did also.
- At first, I thought it may not pertain a lot to the mental health field.

14. Additional comments:

- The packet of information was most helpful. I like the idea of being able to concentrate fully on what was going on without having to worry about taking notes.

- Need for slowing tape. Some of answers on tests were not clarified by information presented.

- Few suggestions on the section of hearing loss and aids: When you are discussing conductive losses you show pictures of kids with hearing aids which isn't really accurate. Also, is that a slide picture of an all-in-the ear aid? It didn't look like one to me. Also, please check the anatomy. I really didn't see the need for that section anyway. A general discussion of the 3 major parts of the ear and where the type of hearing loss occurs. Thanks so much - very informative!

- Hopefully, workshops like this will be a beginning of better public education. Thank you!

- Music sometimes too loud; some parts too fast. Bone conduction aids - should that be included? Another slide or two on audiogram dealing with frequency, decibel, etc. if this is to be used <u>without</u> facilitators like you. Fix diagram of ear in folder so stapes is spelled correctly and so malleus is not connected to semicircular canals (maybe also use "tympanic membrane" for eardrum?) or is Tymponum what is used now....? Enjoyed it immensely!

- Pre- and post-test items - I believe #3 was not specifically answered in today's activities, especially regarding dates and percentage. #1 seems to include 2 questions that could have different answers. #8 is ambiguous. #9 - to change ALL buildings to accommodate ALL exceptionalities seems unreasonable. (a house is a building, for example) I feel the workshop experience adds to my effectiveness as a counselor. Thanks.

- Reduce rate of speech on 1st tape. Reduce volume of music on all tapes. Use arrows to point out ear parts on slides. Information is concise and well presented. Don't reiterate media presentation with lecture. Relate the presentation a bit more to counseling or emphasize the role counselors can play in working with classroom teachers. Need for specific information/ techniques for career counseling.

- Highly informative. Really stimulated my thinking in this area.

- Great job.

- Workshop was excellent.

- The first non-verbal activity had some skips that were difficult as a first time exercise - limitation with non-verbal communication - the national teachers convention.

- I enjoyed the workshop - wish our entire faculty could experience it.

- We need more follow up and feedback in this area.

- Excellent - team effort. Would like it done again in Brevard!
- Excellent program - very helpful.
- Enjoyed meeting each facilitator. The workshop was organized in a productive and interesting manner. Thank you for coming.
- It's a joy to meet people who have such compassion for the deaf.
- Feel I have gained so much knowledge about a subject I didn't know much about. Excellently prepared. Liked the slide tape video presentation especially. That gave me a lot of insight into the many problems of the hearing impaired.
- Very valuable and helpful. This had made me more aware of the needs of hearing impaired students especially in the field of vocations. Very well put together!
- Definitely one of the BEST workshops I have participated in! Good work!!
- One of the most interesting workshops I've attended!
- This was a totally new experience for me. It is the type of thing that never gets considered unless a specific incident or need comes to light. I appreciate the opportunity to attend and feel the workshop has been highly beneficial and informative. It's evident that much time and effort has been given to the development of the program, and should be a great success!
- Glad I came. Anticipate further experiences of this sort. Lines are far too small for my handwriting technique. Would like to have written more. However, I feel highly enlightened!
- The communication between the instructors and the group was outstanding. All workshops should be presented on this level.
- I really like the pace. I didn't have time to get bored or sleepy and had a learning experience to boot.
- Drawing of ear unclear. Suggest either shading or color copy. Recorded speech too fast.
- This is only conclusive up to and excluding the last hour of the seminar. On the whole, it was a very good presentation and material very helpful. Would like more information on the deaf and mental health.

APPENDIX D

WORKSHOP FORMAT

WORKSHOP FORMAT

8:45 I. Introduction

A. Welcoming remarks and staff introductions

B. Overview of the workshop schedule and format

1. Mixture of experiential activities and presentation of information

2. Workshop modules to be covered:

a. Hearing loss (general information)

b. Amplification equipment

c. Deaf speech

d. Communication with hearing impaired students

e. Implications for learning

f. Vocational/career implications

9:00 C. Warm-up activity: Deafness and its impact on my favorite activities

1. Distribute a 3 x 5 index card to all participants.

2. Participants each list the five activities that give them the most joy in their lives.

3. Form groups of 4-7 people each.

4. Each group member shares their list with the small group by reading the lists individually.

5. Small group discussion on how deafness would effect the activities listed. Each group records the major effects on newsprint.

6. Large group sharing

a. Groups report on their major effects lists.

b. Identify <u>stereotypes</u> and <u>myths</u> about hearing impaired people that are implied in the group reports. Discuss

these stereotypes and myths briefly.

7. Return to small groups to develop "I learned . . ." statements or "I was surprised that I . . ." statements based on the activity.

D. Slides #1-47. Introduction (#1-35) and P.L. 94-142 (#36-47). Question and answer period. Issues usually discussed here include clarification on due process, individualized education plan, and least restrictive environment.

10:00
Break

10:15 II. Hearing losses and amplification equipment.

A. Introduction to hearing loss and amplification equipment. Specific areas covered include:

1. Types of hearing loss
2. Causes of hearing loss
3. Location of hearing loss within the ear
4. Types of hearing loss commonly occurring in school age children.
5. Explanation of pitch and frequency

B. Hearing loss slides # - .

C. Amplification slides # - .

D. Question and answer period.

E. Introduction to "Getting Through: A Guide to Better Understanding of the Hard of Hearing". (audio tape segment)

11:00 III. Deaf Speech

A. Introduction to deaf speech:

1. Characteristics
2. Methods of teaching speech to hearing impaired

B. Introduction to audio tape and activity relating to speech:

1. Participants will be presented with four segments of deaf speech. The first two parts will be one sentence statements. The third part will be a two to three minute uninterrupted discussion. The fourth segment will be one sentence.

   a. Play segment one. Participants write their understanding of the sentence. The written messages are read within the small groups. Comparisons are made and accuracy discussed.

   b. Play segment two. Repeat (a) above.

   c. Play segment three. Participants briefly note the topic of discussion. Read and compare within small groups.

   d. Play segment four. Repeat (a) above.

2. Discussion of learnings and reactions. Focus discussion on the need to allow the deaf student to talk uninterrupted for a few minutes. This time will allow the listener an opportunity to become more familiar with the student's unique speech pattern.

11:30 IV. Communication strategies

A. Charades activity. Small group format.

1. Each person gets a message card. The card has an urgent information request. The participant must communicate the message to the small group without using words. Group members attempt to guess the message as in the party game "Charades". A number of suggested message card situations are included at the end of the workshop format section.

2. Process issues to discuss in small groups:

   a. Reaction to communicating without words in a crisis.

b. Feelings toward those who did not understand their message.

c. Implications for your behavior when relating to hearing impaired students in school.

d. Your thoughts about what others observing you act this message out thought about you as a person.

B. View communication strategies slides # - .

C. Creation of a sign (signs) for each participant using their name or other aspects of their life. Develop a sign or series of signs that communicates who you are to the other participants. This sign will be shared with your group members when we return from lunch.

12:00
Lunch

1:00 V. Share personal sign. Implications for learning.

A. Introduction and content presentation; to contain the following issues:

1. Early effects on learning related to hearing loss.

2. Language development and its relationship to learning capacity.

3. The effects of teacher and peer behaviors on learning for the hearing impaired.

B. View learning implications slides # - .

C. Abstract language and idiom simulation activity.

1. Abstract language: Two members of each small group are given the abstract work definition cards. They both privately read the cards and then conduct a brief conversation, using the words. The conversation is directed at the total group. The members who do not know the words are expected to

participate in the conversation despite their "ignorance".

a. Words and definitions; typed on one side of a 3 x 5 index card.

fronk = development	poflot = agree
stroflink = intelligence	wosmosk = factor
ramfot = crucial	smok-trop = self concent
trastod = achievement	

b. Dialogue: 1) The fronk (development) of a student's stroflink (intelligence) is a ramfot (crucial) part of their trastod (achievement) level.

2) Yes, I poflot (agree). The stroflink (intelligence) of a student is also a key wosmosk (factor) in their smok-trop (self concept) fronk (development).

3) And what do you think (turning to a "deaf" group member)?

4) What do you think is the ramfot (crucial) part of one's stroflink (intelligence) trastod (achievement)?

2. Idiom Items:

a. Explain problems of idioms for hearing impaired students.

b. Examples of idioms:

(1) I'm tied up at the office.

(2) Hand in your paper.

(3) Run up to the principal's office.

(4) Run for student council office.

(5) Don't jump to conclusions.

c. Generate as many confusing school idioms as possible.

D. Process the experience with "I felt . . ." and "I learning . . ." statements.

1:50 VI. Vocational implication:

A. Introduction and content presentation; to include the following issues:

1. Career aspirations of hearing impaired students
2. Expanding awareness of career options
3. Guidance/classroom activities to more adequately prepare hearing impaired students for the job search process

B. View vocational implications slides # - .

C. Small group activity:

1. Divide into groups of 5-6 people.
2. Each group is presented with a work situation problem card (ex. typist who cannot hear the carriage bell). Examples of work situation problem cards are provided at the end of the workshop format section.
3. Groups are to individually develop creative solutions to the problem. Share solutions with total group.
4. Process: Discuss role of counselors/educators in educating employers regarding the capabilities of hearing impaired students as prospective employees.

2:20
Break

2:30 VII. Testing implications:

A. Introduction and content presentation

1. Main difficulties in testing of the hearing impaired:

a. Verbal nature of the instructions

b. Verbal nature of test content

c. Standardized on normal hearing population

2. Importance of appropriate test selection

a. Consideration of current achievement level

b. Consideration of unique needs of the population to be tested

c. Method of feedback for the results

3. Suggested strategies to maximize test performance of hearing impaired students.

B. View testing implications slides

C. Discussion

3:00 VIII. Closure and summary

A. Post-test

B. Workshop evaluation

C. Closing remarks

CHARADE MESSAGE CARDS

You are going on a trip to visit relatives. You are at the train station. You need to know exactly what time the train leaves for Boston and which platform to go to for boarding.

You are a diabetic. You are spending the day at Disneyworld and feel you are having an insulin reaction. You need some food (orange juice and crackers) to counteract the reaction.

You and your friend have gone shopping at the local mall. Your friend suddenly faints. You need someone to call for an ambulance.

You are studying at the library. Your head begins to hurt terribly and you need an aspirin and a glass of water.

You are on vacation in California. You find that your American Express money orders are missing. You need someone to call the company to reissue them. WHAT WILL YOU DO??

You are attending the National Teachers Conference in a strange city. You arrive by bus. You know that the Civic Center is located downtown somewhere near the bus depot. You need to know which way to go to find it.

You have been shopping and return to your car to find it has been hit. You need to notify the police.

Someone has stolen your purse and beat you up. You must tell the police and describe your assailant.

Your dog ran away yesterday and has not come home. You need to describe him to the people at the Humane Society Shelter.

WORK SITUATION PROBLEM CARDS

You have taken typing in school and have become pretty good at it. The only problem you have is in aligning the margins. You are unable to hear the bell ring. A local business has offered you a job typing forms. To do so, you must be able to keep the margins straight. How can you solve your problem so that you can take the job?

You like working on machinery. You have read a great deal about air conditioning and think you would like to go into air conditioning repair. Your shop teacher tells you that you will not be able to hear the motor to analyze or troubleshoot problems. How can you overcome this barrier so that he will allow you to study air conditioning repair?

There is a job opening at the local pizza place. You really need the job and would like to work there. The job requires you to take orders and ring up sales. You do not lipread well. How could you manage to take orders?

You are in the counselor education program at the university. Part of your job is supervising undergraduate students in counseling situations by use of audio-visual equipment. The students are counseling in small rooms and you are monitoring them on a screen in the monitor room. You cannot hear what is being said through the earpiece. How can you overcome this?

You are a doctor and deal with patients who are not deaf. You lipread pretty well, but feel that you might miss some important details in their treatment. How can you compensate for your hearing loss and provide maximum care for your patients?

APPENDIX E

PARTICIPANT WORKBOOK

Below are some statements about handicapped students. Indicate in the blanks provided whether you feel the statements are true or false.

After participating in this workshop, you will have an aooprtunity to take the survey again to evaluate your understanding of concepts covered.

_____1. Special attention needs to be given to handicapped students. They should be sheltered from the normal life experiences.

_____2. Mainstreaming is the integration of handicapped students into regular classrooms.

_____3. In 1968, an amendment of the Vocational Educational Act of 1963 allocated 10 percent of the state's vocational education funds for programs for the handicapped students.

_____4. Mainstreaming means that all handicapped students should be educated in the regular classroom.

_____5. The Education for All Children Act provides that education be provided in the "least restrictive environment."

_____6. Employers may not question an applicant about his handicap.

_____7. Community involvement does not affect the handicapped.

_____8. Mainstreaming can help teachers deal with children with special needs in the regular classroom by providing alternatives.

_____9. Only building that are currently being built must provide access for handicapped persons. It would be unfeasible to change the buildings that are already in existance.

MAINSTREAMING

The following statements provide a summary of what it is important to remember about the mainstreaming concept.

MAINSTREAMING:

1. Key words in mainstreaming are most appropriate education and least restrictive environment.

2. The educational needs of all children are considered rather than classifying and separating out all children who have a handicap or disability.

3. Alternatives to help teachers serve children with special needs are provided by mainstreaming.

4. Resource people such as special education teachers, methods and materials specialists and resource room teachers are used to provide the extra help handicapped children may need.

5. General education and special education teachers and staff are combined to provide equal opportunities for all children.

MAINSTREAMING DOES NOT:

1. All children in special classes are not to be returned to regular classes.

2. Children with special needs are not expected to remain in regular classrooms without the support services they need.

3. The needs of the children for specialized programs are not ignored.

4. It does not cost less to mainstream children than it does to provide separate education.

DEAFNESS AND IMPLICATIONS FOR MAINSTREAMING

by

Roslyn Rosen

Conceptual development and communication skills for normal children are byproducts of the "unwritten curriculum." Mervin Garretson, in an article in the Jan. 1977 Deaf American explains that out of the 8,760 hours possible in a full year, only 720 hours or 8% are actually spent in the classroom. The rest is consumed by vacation, sleeping, boob-tube watching, meals, personal and social activities, and peer-interaction time. It is this "free time" that contributes to the unwritten curriculum or incidental learning that becomes the building blocks of a basic education. Formal schooling only serves to develop and refine this for normally hearing children. In a speech at the Michigan School, Garretson quoted Henry Steele Commager, "It is the community (family, farm, government, playground, churches, labor unions, newspapers, radio and television) which performs the major job of education, not the schools." "So," Garretson continued, "for the deaf child, where is the community? Nine times out of ten the hearing community is a physical presence but a mental blankness."

PL 94-142 Regulations (1976) proposes to define hearing loss as follows:

> "Deaf means a hearing impairment which is so severe that a child's hearing is non-functional for the purpose of educational performance."
>
> "Hard of hearing means a hearing impairment, whether permanent or fluctuating, which adversely affects a child's educational performance . . ." (Section 121a.4)

It must be kept in mind that deafness is the handicap that allows a child to see the hustle-bustle of life without permitting him access to its meaning. "The hearing impaired child is in a minority milieu--socially and in communication"

In a regualar public school, the situation of the deaf child cannot be compared with that of the blind or orthopedically handicapped child because the blind or orthopedically handicapped child can hear what is going on around him. The simple fact is that the deaf child does not hear. The implications of this are self-evident and far-reaching.

PL 94-142 includes in the scope of educational performance not only academic achievement, but also social adaption, and prevocational, vocational, psychomotor, and self-help skills.

Yet, if a deaf child is placed in a regular classroom (the so-called least restrictive environment) he may not only miss out on the academic milieu, but also the social and emotional mileus. Is sitting with the family at the dinner table, while mentally isolated and not comprehending, being in the least restrictive environment? Is belonging to the yearbook club, yet not participating in discussions or contributing to the development of the publication, the least restrictive environment? Is eating lunch alone surrounded by hearing classmates

the least restrictive environment? "Putting hearing children and hearing impaired children together is not enough; proximity is not the same as integration. Nowhere is that more true than for hearing impaired pupils."

Other factors that play an important role in the desirability of mainstreaming, are:

1. Parental concern and desire for normalcy.
2. Professional educators in public schools who are unaware of the needs of the deaf but who feel the obligation to serve all children in their districts.
3. Assumption that mainstreaming is less costly. (Actually, appropriate mainstreaming, because of the highly specialized services needed and the low incidence of deafness, will not be cheap.)

The Conference of Executives of American Schools for the Deaf has developed a generalized formula for predetermining educational placement corresponding to specific hearing loss.

PUPIL CHARACTERISTICS IN MAINSTREAMING--In The Hearing Impaired Child In A Regular Classroom, edited by Winifred H. Northcott, PhD, and published by the Alexander Graham Bell Association, the following pupil characteristics were noted as being essential for successful mainstreaming (page three):

"Active utilization of residual hearing and full-time hearing aid usage, if prescribed," to "Demonstrated social, academic, cognitive, and communicative (auditory and oral) skills within the normal range of behaviors of hearing classmates," to "Intelligible speech and the ability to comprehend and exchange ideas with each other through spoken, written and read language," and "Increased confidence and independence in giving self-direction to the tasks at hand."

G. Nix in Mainstream Education for Hearing-Impaired Children and Youth (NY, 1976) summarized additional criteria gleaned from the literature: early identification of hearing loss, early training, functional ability, social stability, teacher and peer attitude and acceptance, interaction skills, parental involvement, and supportive administration and personnel.

Katz, Mathis and Merrill suggest that the child may respond well in an integrated setting if the following questions formulated by Brill in Administrative and Professional Developments in the Education of the Deaf can be answered in the affirmative:

1. Does the pupil use the receptive and expressive skills of communication (speechreading, speech, language, reading, and writing) well enough to function successfully in a regular class program?
2. Are the pupil's social and emotional maturity levels average or above the average of hearing pupils in the regular class?
3. Can the pupil direct his attention to the assigned work and follow the directions given for doing the work?

4. Is the regular class enrollment small enough so that the teacher will have an opportunity to devote some of his time to helping the deaf or severely hard of hearing pupil solve his problems?
5. Will the deaf or severely hard of hearing pupil be seated in the regular classroom so that he has a good view of the teacher's face when instruction is being given and of the pupils' faces when they are speaking? Will sound amplification be provided if the pupil can profit from its use?
6. Are the parents and other members of the family interested in having the deaf or severely hard of hearing pupil assigned to a regular class to the extent of helping him with his home assignments? Will they help him develop solutions encountered in adjusting to the regular class environment?
7. Are the pupil's confidence in his ability to function successfully in a regular class and his determination to do so sufficiently great?
8. Is the pupil willing and reasonably eager to be assigned to regular classes for instruction?
9. Is the pupil's ability to learn, as indicated by his test scores, average or above the average of the pupils in the regular class?
10. Is the pupil's chronological age within two years of the average age of the pupils in the regular class?
11. Will the pupils in the regular class accept the deaf or severely hard of hearing pupil as a member of the class and will they give him the same consideration they expect to give each other?
12. Is the teacher of the regular class informed regarding the problems faced by a pupil as a result of his lack or severe loss of hearing, and is the teacher willing and prepared to employ instructional practices and procedures that should be most helpful to the pupil?

From the preceeding criteria, it becomes evident that great importance is placed on auditory and communication skills as key factors for successful mainstreaming. Countless research supports the fact that lipreading is mainly guesswork; that prelingually and profoundly deaf children rarely attain normal speech, and that hearing aids cannot make the deaf child hear and discriminate speech normally. Thus, mainstreaming seems to be a viable alternative for those children with mild to moderate hearing losses. Does this mean that the prelingually and profoundly deaf child is automatically relegated to special schools?

Not so, says Holcomb (1975). In the Holcomb Mainstreaming Model, total communication and utilization of interpreters render hearing, speech, and lipreading far down the list of the criteria for the selection of children to be mainstreamed at the Sterck School in Delaware. When selected for mainstreaming, the deaf child is put in a class with hearing children only when he has a tutor-interpreter who renders into signs what the regular classroom teacher says. The tutor-interpreter also helps the deaf and hearing children in the class by totoring or teaming up with the regular teacher. Thus, instead of being dumped into

a class with 30 hearing children and not being able to understand the teacher, the deaf child is given the necessary support, i.e., the interpreting and tutoring needed to enable him to grasp and keep up with classroom activities.

Additionally, intensive orientation, inservice training, manual communication classes, special services, and support personnel are routinely provided to the regular teachers and hearing children in order to facilitate mainstreaming for the deaf. In this model, it is not the deaf child who must fit the system, but rather the program that must meet the child's needs.

The National Education Association takes an advocacy view on mainstreaming, but has spelled out the circumstances under which it should occur. Its position is stated in the following Resolution 75-27 as passed by the 1975 Representative Assembly:

> The National Education Association will support mainstreaming handicapped students only when:
> a. It provides a favorable learning experience both for handicapped and for regular students.
> b. Regular and special teachers and administrators share equally in its planning and implementation.
> c. Regular and special teachers are prepared for these roles.
> d. Appropriate instructional materials, supportive services, and pupil personnel services are provided for the teacher and the handicapped student.
> e. Modifications are made in class size, scheduling, and curriculum design to accommodate the shifting demands that mainstreaming creates.
> f. There is a systematic evaluation and reporting of program developments.
> g. Adequate additional funding and resources are provided for mainstreaming and are used exclusively for that purpose. (NEA Briefing Memo, 1975)

INDIVIDUAL PLACEMENT DECISIONS--All of the preceeding criteria enter the picture when placement decisions are made usually by the CORE evaluation team, or after the child's goals and special needs are identified in his Individualized Educational Program. The community, schools, and resources must also be investigated to determine whether they can fit the bill in terms of meeting the deaf child's educational, social, and emotional needs.

It would be impossible to come up with hard and fast rules for determining which educational placements would be appropriate for which kinds of hearing impaired children without taking into consideration the assets and liabilities of the individual child, his family, his community, and the different educational alternatives on the continuum. To do so otherwise would imply prophecies based on labels.

Mainstreaming is but one of the many options which have been identified in providing optimal services to all handicapped children. PL 94-142 says that programs are not arbitrarily chosen from among those on the continuum--but rather programs will be provided which are appropriate to the individual needs of individual children.

THE STUDENT AND FACTORS THAT CAN CONTRIBUTE TO A POSITIVE SELF CONCEPT

There are various approaches to viewing individual development. This includes emphasis on the physical, social, emotional, and intellectual development of the individual. This handout will focus on the role of the teacher in the development of the student. It is recognized that there are other social influences in the life of the student including peers, family, neighbors, and others. However, the role of the teacher is of utmost importance, since the classroom is a place from which young people get foundation, support, and assistance in becoming independent.

Factors that can interfere with the development of the child's positive self concept and factors that can contribute to a positive self concept will be discussed.

Factors That Interfere With The Development Of A Positive Self Concept

The public school years represent a period when the individual is searching for identity, direction, and struggling with dependent and independent feelings.

During this stage of development, the young person seeks a lot of feedback from the immediate environment. Teachers play an important role in helping the student determine direction, and they influence the child's self concept. The teachers' reactions and actions toward the student can either assist or hinder positive social, emotional, and intellectual development.

In working with students, the most frequent reasons for teacher/child relationship problems are:

1. Over-protectiveness. This denies the young person the opportunity to experience his/her environment, learn from mistakes, and enjoy successes.

2. Lack of communication between teacher and student. Communication between the teacher and child exists less and less. Therefore, the young person is unable to communicate feelings and needs to the teacher. For the student, this is a time when they need discussion and answers to questions regarding acceptable and unacceptable behaviors, socialization skills, emotions, information about sexual development, etc. As communication dwindles, so does the teacher's role in the life of the child.

3. No assistance in developing decision-making skills. As young people approach adulthood, they will need to and will be expected to make decisions. If they are not exposed to this process in the classroom, they will have difficulty outside of the classroom in making decisions that are beneficial to them in terms of selection of friends, classes, involvement in various activities, etc. It is important to include the student in decision making within the

class that affects him/her.

4. Failure to give responsibilities. To assume responsibility, a person needs experience in completing tasks, understanding what is expected and knowledge of their strengths and weaknesses. Failure to give the student increasing responsibility can communicate low expectation of his/her abilities.

5. Setting unrealistic, unclear, and inconsistent limits. Young people will question, resist, and test their teachers' limits. This is not unhealthy since they are developing their ideas and value systems. Teachers need to be clear about why they have established rules and be consistent in the application of rules. Limits should be set in a manner that preserves a young person's respect and are based on values and directed at character building.

When young people experience these factors, some struggle for a short time to make changes, give up, accept it, and become dependent individuals with no goals for themselves.

Others continue the struggle to break the cycle. When this happens, sometimes the teacher listens to the student's views, looks at what has been occurring in the relationship, seeks ways to adjust their approaches, and assists the young person to move towards becoming an independently functioning adult.

However, some teachers' responses are just the opposite. They develop feelings of anxiety, guilt, fear, anger, and more protective approaches. For the student, these responses can cause frustration, depression, anger, insecurity, and/or resentment.

Factors That Can Contribute To A Positive Self Concept

These factors should be considered by teachers and others who have close relationships with the student. Those close to the student can contribute to positive growth and development in the following ways:

1. Permit the student independence.

2. Give responsibility according to ability level and provide frequent positive reinforcement.

3. Maintain open lines of communication.

4. Assist the student in self-understanding and potential.

5. Provide positive role models.

6. Give opportunities for the student to make decisions and participate in classroom decisions.

7. Set consistent, clear, and realistic limits.

8. Provide emotional support and guidance.

9. Accept the student as a growing, worthwhile individual who can become a productive individual, within their ability range.

10. Relax and enjoy seeing the student develop.

TYPES OF HEARING LOSS

CONDUCTIVE LOSS:

A conductive loss occurs when sound is not carried through the external ear and/or middle ear efficiently. All sounds appear to be muffled. A conductive loss may be caused by blockage or damage in the external ear and/or middle ear. Most conductive losses may be restored by medical or surgical treatment.

SENSORI-NEURAL LOSS:

A sensori-neural loss occurs when sound is properly carried through the conductive mechanism (external ear and middle ear), but there is damage to structures within the inner ear or auditory nerve. This type of loss is sometimes called "nerve" or "perceptive" deafness. A sensori-neural loss tends to effect high frequency sounds more than low frequency sounds. Even with amplification, these sounds remain distorted.

MIXED HEARING LOSS:

A loss caused by damage or malfunction in both the conductive and sensori-neural mechanisms. It is a combination of both a conductive and sensori-neural hearing loss. The person has difficulty hearing some sounds without amplification and with amplification some of the sounds still remain distorted.

CENTRAL HEARING LOSS:

A hearing loss due to damage within the brain and/or its neural structures. The brain is unable to recognize or understand sounds. The person may hear speech, but cannot understand it.

There are four main types of hearing loss and within each group there are may be different degrees of hearing loss. Following is a list of severity of loss as expressed in dB(decibels).

30-50 dB	Mild
50-70 dB	Moderate
70-85 dB	Severe
85-110 dB	Profound

HEARING AIDS

I. DEFINITION OF HEARING AID: A hearing aid is a miniaturized electronic device which amplifies all sounds. A hearing aid does not make sounds clearer, it only amplifies sound. A hearing aid cannot provide one with "normal hearing", but it can produce significant benefit to many individuals. All hearing aids contain a microphone, amplifier, and receiver (miniature loudspeaker).

II. PARTS OF HEARING AIDS:

1) VOLUME CONTROL (or Gain Control): Adjustment of this control regulates the sound intensity delivered via the receiver (loudspeaker). In other words, it controls how much incoming sounds are amplified. The volume control may need to be adjusted according to the listening situation. This control also acts as an "on-off" switch on some aids.

2) TONE CONTROL: Adjustment of this control will change the frequency response, e.g. selective emphasis lower or higher pitched sounds. This control can have some effect on the clarity of speech heard via the aid. Setting of this control is determined usually at the time of the hearing aid evaluation and should not be changed without consulting your audiologist.

3) POSITION SWITCH:
M= microphone (setting normally used)
T= telephone (used for telephone or "loop system")
B or MT= both microphone and telephone
O= off position

4) BATTERY: provides the electrical power used in operating the hearing aid.

5) MICROPHONE: picks up acoustical (sound) waves.

6) AMPLIFIER: increases the strength of the electrical signal, e.g. amplifies. The amount of amplification provided by an aid is termed gain (expressed in dB). The amount of gain produced varies according to the aid and the needs of a specific individual.

7) RECEIVER (loudspeaker or earphone): changes the electrical signal from the amplifier back into the acoustical signal.

8) EARMOLD: An earmold is custom made to fit an individual's ear and it connects the receiver to the ear canal. In the case of behind-the-ear aids, the earmold also helps to secure the aid in place.

III. TYPES OF HEARING AIDS:

1) IN-THE-EAR: This type of aid is essentially built into the earmold and fits directly into the ear. Generally only used by persons with mild or moderate hearing loss.

2) BEHIND-THE-EAR: The microphone, amplifier, and receiver are all housed in a single unit which fits snugly behind the ear. This unit is connected to the earmold by a piece of short plastic tubing. These aids are used by persons with losses ranging from mild to severe.

3) EYEGLASS: This type of aid is very similar to the behind-the-ear type, except that it is built into one's eyeglass frames. Only used by persons who wear eyeglasses at all times.

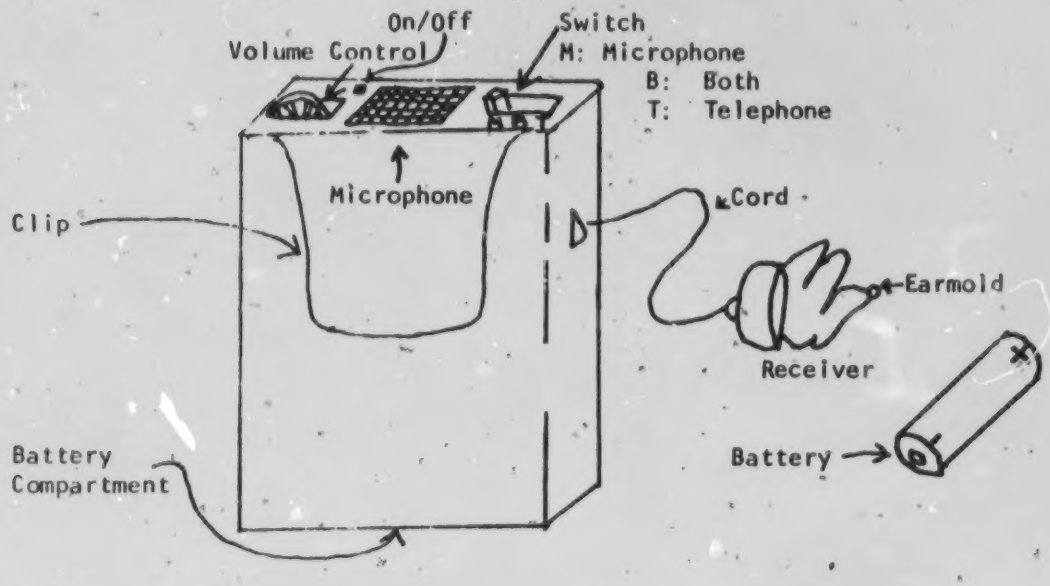
4) BODY AID: Known as the traditional aid. The body-aid consists of a large microphone, amplifier and power supply contained in a case which can be worn in a pocket or strapped to the chest. A cord attaches this unit to the receiver which is attached to an earmold located in the ear. Generally used by persons with severe to profound losses; although, behind-the-ear hearing

aids have been replacing body aids in recent years.

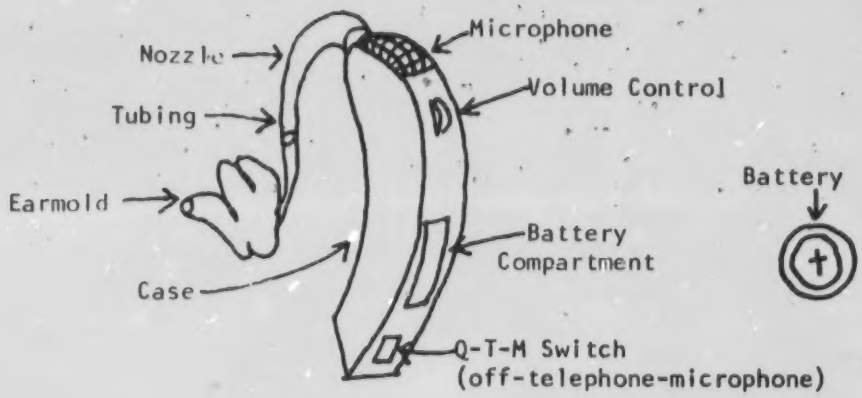
5) MONAURAL HEARING AID SYSTEMS: an aid used for only one ear.

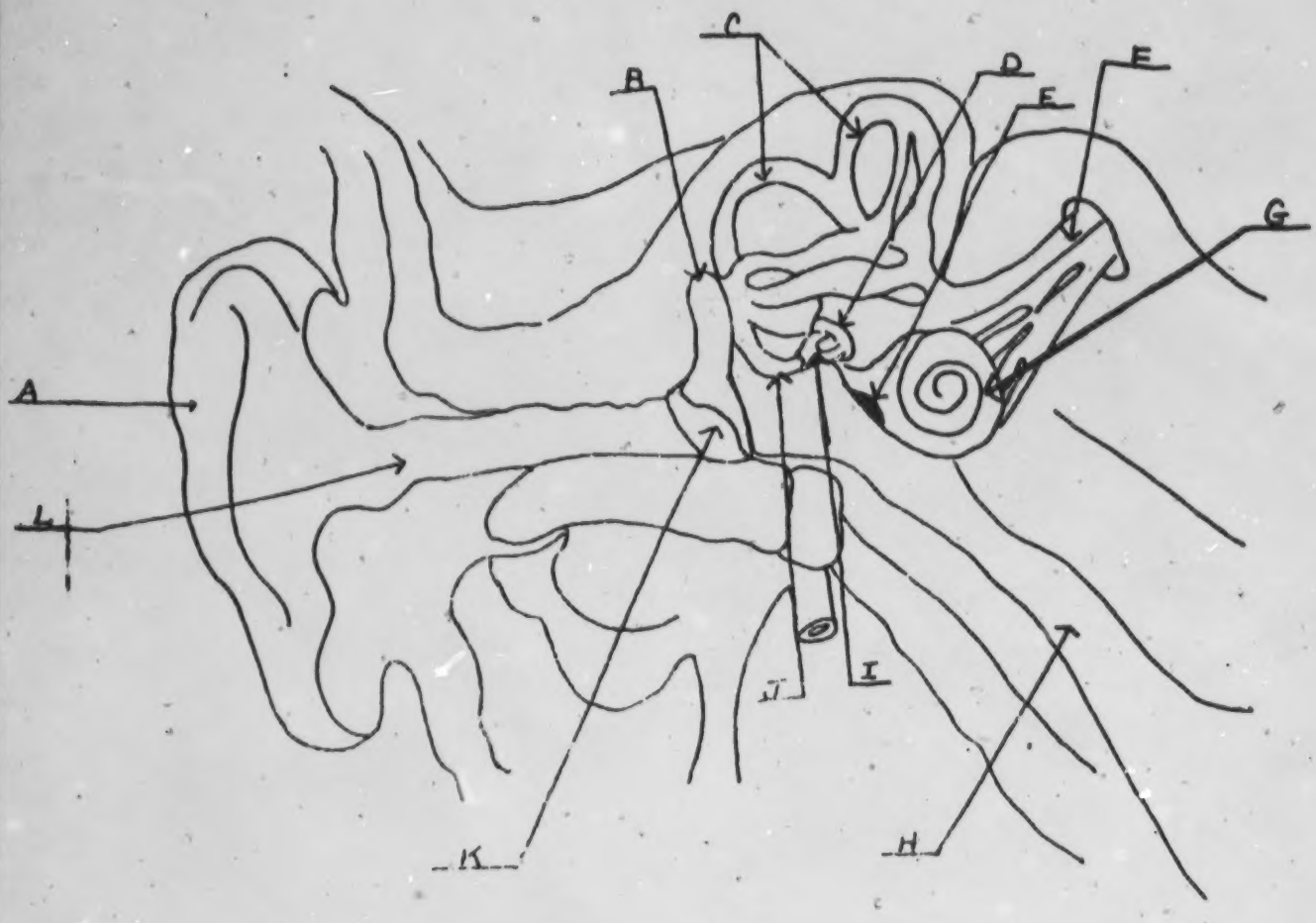
6) BINAURAL HEARING AID SYSTEMS: two complete hearing aids, one for each ear.

BODY AID



EARLEVEL AID





Place the appropriate letter from the diagram in the space next to the term which defines that part of the ear.

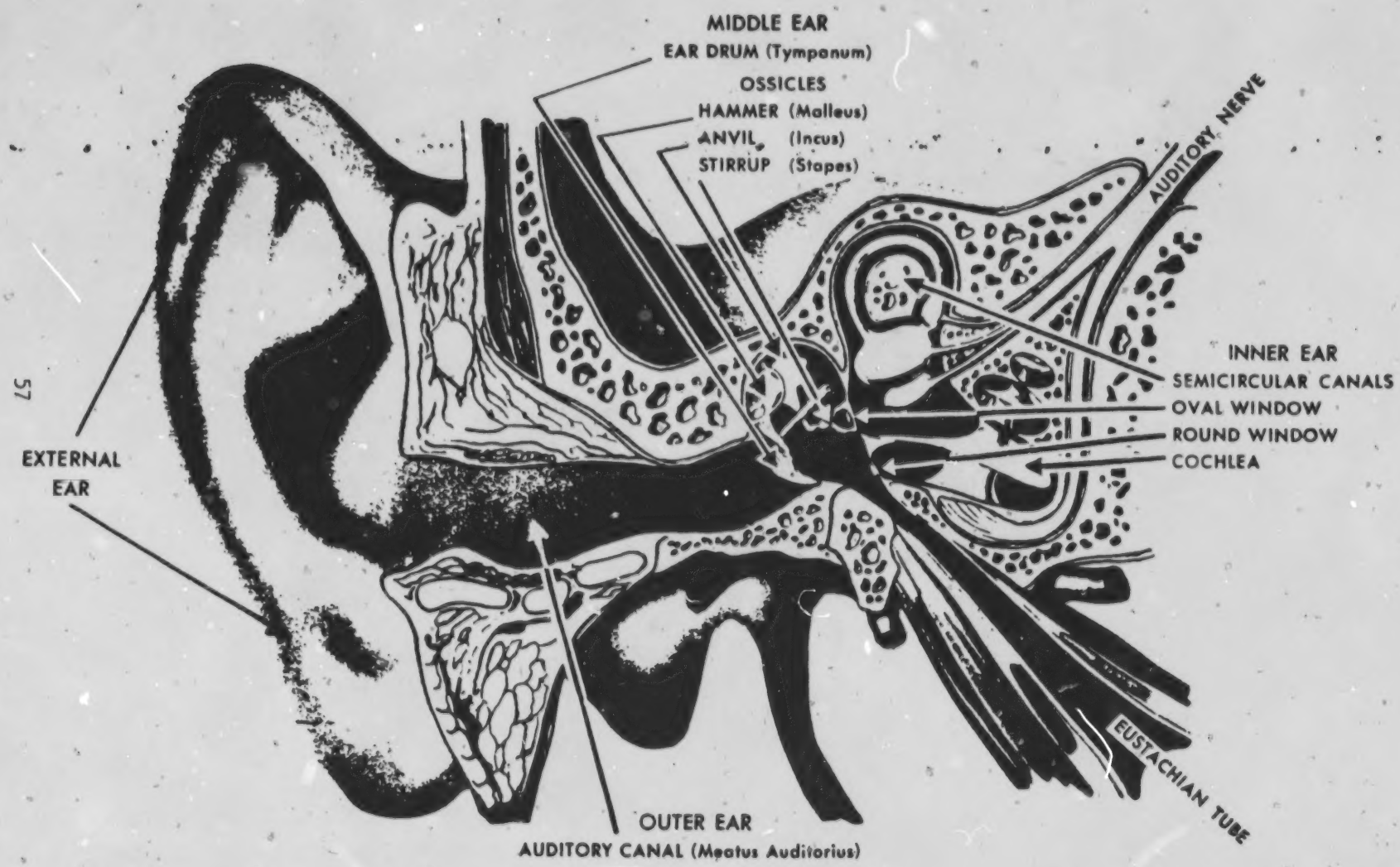
CONDUCTIVE LOSSES

Outer Ear	Middle Ear
___Pinna	___Incus
___Auditory Meatus	___Malleus
___Tymponum (Eardrum)	___Stapel

SENSORINEURAL LOSSES

Inner Ear

___Round Window
___Cochlea
___Oval Window
___Auditory Nerve
___Semicircular Canals
___Eustachian Tube



ORANGE HEARING AID CENTER
1503 South Orange Avenue
Orlando, FL 32806
(305) 849-6520

COMMUNICATION AND THE HEARING IMPAIRED STUDENT

High school aged deaf students may employ one or several methods of communication. Most students use speech at least part of the time. The prelingually deaf student is often restricted in the use of speech while those who became deaf after acquiring some language skills are generally more skilled in oral communication.

Other forms of communication include finger spelling, signing, and writing. The combination of oral and manual means of communication is called Total Communication.

Finger spelling consists of spelling out words with the fingers of one hand by using a different hand position for each letter and number. The hand is held in front of the body at chest level with the palm facing the receiver. Each letter must be formed precisely and movement from one letter to the next should be done with a fluid motion without excess hand motions. Finger spelling is easy to learn, but communication by using this method exclusively is slow and sometimes tedious.

Sign language is the use of manual signs for words, phrases, and concepts. It is more difficult to learn than fingerspelling due to the large number of different signs. American Sign Language is one type of sign language and is recognized as a separate distinct language from English. Ameslan is one of the dialects of American Sign Language. A separate symbol is not used for each word, but utilizes concepts as the basis for the signs. Syntactical use does not necessarily coincide with spoken English. Signing Exact English (SEE) is another form of sign language. It follows the word order of English and utilizes a different sign for each word. Word prefixes and suffixes are also utilized as well as tense changes.

If sign language is the primary form of communication used by the deaf student, it may be necessary to use an interpreter in counseling sessions. The following are some guidelines for facilitating communication when using an interpreter.

1. Allow the student to select the interpreter when possible. Use of relatives can inhibit communication.
2. Seat the student closest to you to reinforce your primary interest in him or her and address the student directly, not the interpreter.
3. Request the interpreter to wait until you have completed your statements before attracting the attention of the student.
4. Ask the interpreter to verbalize what is being signed.
5. Never discuss the student with others in his presence.

Written communication may be necessary with some deaf students. Be aware of the use of idiomatic and coloquial analogies, language and complex abstractions. Words with multiple meanings need to be clarified , as a majority of deaf students read at the fifth grade level or below.

Many deaf students are adept at lipreading. One point that should be stressed is that deaf persons who do lipread only comprehend about 45 percent of what is being said. It may be necessary to supplement speech reading with some other form of communication. Some aids in facilitating lipreading are:

1. Avoid strong backlighting--keep the light in front of you.
2. Speak naturally--exaggerated speech distorts mouth movements.
3. Smoking or chewing gum makes lipreading very difficult.
4. Rephrase instead of repeat when the student has difficulty understanding you.
5. Have pencils and paper on hand.
6. Use any aids available to facilitate meaning. (Objects, people, events.)

When counseling with a client, the student can often understand you, but his speech may be unintelligible to you. Do not pretend to understand when you do not. Use pencil and paper for clarification. Often allowing the student to talk uninterrupted for several minutes will help you to become familiar with his speech.

Remember that a deaf student is a person <u>first</u> and a person with a hearing problem second.

The physical placement of the hard-of-hearing child in the classroom is very important. The suggestions which follow will enhance the likelihood that the child will have full awareness of what is going on in the classroom:

1. Make certain that the child is seated where the persons who are speaking are best seen and heard.

2. Seat the child where there is the least amount of interfering noise. A seat up front in the aisle farthest from the window should accomplish this objective. However, the child should be permitted to move as freely as space permits if the teacher moves from one part of the classroom to another.

3. Make sure that there is no light glare in the child's eyes.

4. When addressing the hard-of-hearing child, speak naturally but somewhat more loudly and slowly than usual.

5. Use appropriate gestures freely, especially if the words or ideas are new.

6. Emphasize the use of prepared visual materials. Use the blackboard for writing words, phrases, and sentences which are associated with the essential material of the oral presentation.

7. Remember to observe the child for signs of lack of comprehension or confusion. If material is repeated, it should as much as possible be an exact repetition. If rephrasing is in order, provide cues that you are indeed rephrasing and not repeating. Something such as, "I will say it another way." should do. The "other way" should be in clear syntactic structures.

8. If the child is using a hearing aid, make sure that it is operational, batteries are on and working, and ear piece is properly fixed.

VOCATIONAL COUNSELING NEEDS OF THE HEARING IMPAIRED

Language and communication skills are one of the most frequently cited handicaps of the hearing impaired person. Research shows that approximately 30 percent of the hearing impaired population are functionally illiterate. Another 60 percent function at the fifth grade level or below in reading skills while only 5 percent function above the 10th grade level. This lack of mastery of reading and comprehension skills has serious implications in job placement possibilities.

Social maturity presents an obstacle to the hearing impaired person. A lack of skill in interpersonal relationships, social adjustment, adaptability, and responsibility are often stated as reasons for job failure in the hearing impaired population. A Minnesota Governor's Conference on Improved Services to the Hearing Impaired in 1972 listed the development of independence and social competence as primary needs of the deaf.

A lack of sophistication in job seeking skills is another area which causes the deaf person problems. He is often unaware of application and appointment making proceedures and has little knowledge of interview requirements such as filling out applications and providing references. Role playing, mock interviews, films and closed circuit television are recommended techniques for improving skills and could be incorporated into an existing career education program.

The job requirements in many areas of work that could previously be met by a good trade or technical program now require much broader based competence in English, math and science. Additional emphasis on mathematics, physics, graph reading, formulas, ratio scales and metrics will help to expand the vocational competence of the deaf student. Educators of the deaf generally agree that the current provisions for vocational education and training are inadequate and limited in scope. Schools for the deaf exclude comprehensive information about the various careers due to cost and bleak employment outlook. This lack of information contributes to the limited choice of careers for the deaf. It would be well for the vocational counselor to re-examine the scope of job choices recommended to the deaf client in an effort to broaden the range of career choices for the deaf.

Guidance in the high school years could direct its attention toward the goals and objectives of adult life. Values clarification exercises and career education components could be a beneficial addition to the high school guidance program. Vocational choice and training are major concerns with emphasis on a realistic attitude on the part of the deaf student, his family and the counselor. Realistic counseling dealing with the basic skills of daily living would include the development of higher aspirations and the growth of social competence and independence. The Whitebrook school in Manchester, England includes general information about the working world in the last two years of schooling. Students are instructed in interview skills and how to complete questionnaires and applications. An integral part of this training includes trips to local businesses and trial work experiences in the community. Their ideas could be adapted to the program in most high schools.

DEAF PEOPLE IN THE WORLD OF WORK

Edward C. Carney

Among educated deaf persons there is surprisingly little unemployment. There is a rapidly increasing unemployment problem among the less educated deaf population but that is a different story. Our purpose is to attempt to give some information relative to deaf persons you might be expected to meet as applicants for employment.

With this group, the major problem is not unemployment but under-employment.

Someone has remarked that the biggest handicap of the deaf man is the man with so-called normal hearing. Because many deaf persons cannot speak distinctly or do not attempt at all to communicate verbally with strangers, and owing to the completely false but widespread belief that all deaf persons of normal intelligence can learn to speak and read lips, there is a deplorable tendency on the part of the average citizen to assume that lack of speech connotes feeblemindedness. Nothing could be farther from the truth, as uncounted research studies have proven. Consequently, I would caution you not to equate language or speech skills with intelligence.

Successful lipreading depends largely upon good speech on the part of the person with whom a deaf individual is attempting to converse, and the man on the street has not been taught to speak properly. He talks too rapidly, possibly slurs his words together, does not speak out so there are visible lip and tongue cues, moves his head when he talks, or possibly after being told he is speaking to a deaf person will sidle up and begin to shout close to the side of your head. Practically all deaf persons read lips to some extent but the success of this is dependent upon factors too numerous to mention at this time. Suffice it to say that once a deaf person has become oriented to a place of employment and well enough acquainted with his fellow workers to cope with their speech idiosyncracies, his ability to communicate lucidly customarily increases markedly.

Deaf are People

Deaf persons are, first of all, people...they pull on their pants one leg at a time just like anyone else. They are subject to the emotions, reactions, aspirations, frustrations, impulses, fears, strengths, weaknesses and similar characteristics of any other human being. In consequence there should be no stereotyped thinking as to vocational limitations. The sole criterion should be the native skills of the individual, his training, and a demonstrable ability to use them effectively. Naturally, there are a few vocations the nature of which preclude consideration of a deaf applicant; air traffic controller for example, or telephone sales. However, deaf persons have achieved a high degree of success in a remarkable variety of work situations and have demonstrated considerable ingenuity in overcoming or bypassing erstwhile communication difficulties. It is possible to document deaf persons who are first rate engineers, patent searchers, marble polishers, law clerks, heavy equipment operators, computer programmers, tool and die makers, cartographers, production supervisors, photographers, actors, jewelry designers, inventors, chemists, high-level administrators and the like. Many of these handle the problem of use of telephone by having a clerk or other lower grade employee listen and interpret for them either

TESTING

5 SUGGESTIONS WHEN TESTING A HEARING IMPAIRED STUDENT:

1. Give several practice items to assure understanding of the testing procedure.

2. Administer an easier or less involved test first in order to reduce anxiety.

3. Test in several short blocks of time rather than in concentrated periods.

4. Administer tests individually rather than in groups.

5. Face the student so that the lips and hands are not shadowed.

TESTS USED WITH IMPAIRED STUDENTS:

INTELLIGENCE TESTS:

The Chicago Non-Verbal Test includes verbal or pantomined directions from age eight to adult. Norms are designed for people with a language handicap and this test is useful for screening.

The Huskey-Nebraska Test of Learning Aptitude involves deaf and hearing norms to age 17. Recuires no verbal response.

The Leiter International Performance Scale is useful for the hearing impaired age 2-18 and can be administered without using language or pantomine.

The Wechsler Adult Intelligence Scale (WAIS) and the Wechsler Intelligence Scale for Children (WISC-R) are considered the most accurate instruments for assessing intelligence of deaf students. The WISC-R performance scale has been standardized on a deaf population.

ACHIEVEMENT AND APTITUDE TESTS:

The Stanford Achievement Test measures academic achievement and the level at which the student is working.

The Flanagan Aptitude Test is considered a good predictor of potential vocational success if administered individually. This test measures verbal reasoning, numerical ability, abstract reasoning, space relations, mechanical reasoning, language usage, and clerical aptitude.

INTEREST TESTS:

The Career Assessment Inventory is geared toward careers not requiring advanced degrees.

The Career Ability Placement Survey measures the abilities required for entry requirements into a majority of jobs in 14 occupational clusters.

The Kuder Occupational Interest Survey (Form D) and the Strong-Campbell Interest Inventory Test are considered too highly verbal for many deaf students. At least a sixth grade reading ability is required.

COLLEGE/CAREER PROGRAMS FOR DEAF STUDENTS

National

GALLAUDET COLLEGE
Bernard L. Greenberg, Director of Admissions and Records
Gallaudet College
7th and Florida Avenue, N.E.
Washington, D.C. 20002
Telephone & TTY: 202-447-0841

NATIONAL TECHNICAL INSTITUTE FOR THE DEAF
Admissions Office
National Technical Institute for the Deaf
One Lomb Memorial Drive
Rochester, New York 14623
Telephone: 716-475-6318
TTY: 716-475-6173

South

Alabama

E.H. GENTRY TECHNICAL FACILITY
James Harris, Liason Counselor
Department of Adult Blind and Deaf
E.H. Gentry Technical Facility
P.O. Drawer 17
Talladega, Alabama 35160
Telephone: 205-362-1050
TTY: Data not reported

Florida

ST. PETERSBURG JUNIOR COLLEGE
Dr. Calvin D. Harris, Director
Special Programs
St. Petersburg Junior College
2465 Drew Street
Clearwater, Florida 33516
Telephone: 813-546-0011, ext. 413
TTY: 813-546-0011, ext. 410

TAMPA TECHNICAL INSTITUTE
Aggie K. Howes, Director
Deaf Student Services Program
Tampa Technical Institute
1005 E. Jackson Street
Tampa, Florida 33602
Telephone & TTY: 813-223-[illegible]

Kentucky

JEFFERSON STATE VOCATIONAL-TECHNICAL SCHOOL
Norma D. Lewis, Interpreter-tutor
Special Programs
Jefferson State Vocational-Technical School
727 W. Chestnut Street
Louisville, Kentucky 40203
Telephone: 502-588-4136

Louisiana

DELGADO COLLEGE
Mr. Roy L. Pierce, Director
Regional Education Center for the Deaf
Delgado College
615 City Park Avenue
New Orleans, Louisiana 70119
Telephone: 504-486-7393, ext. 346

North Carolina

CENTRAL PIEDMONT COMMUNITY COLLEGE
Bertha, counselor
Post Secondary Program for the Hearing Impaired
Central Piedmont Community College
P.O. Box 4009
Charlotte, North Carolina 28204
Telephone: 704-373-6621
TTY: 704-373-6421

EAST CAROLINA UNIVERSITY
Leonard M. Ernest, Director
Program for Hearing Impaired Students
East Carolina University
Greenville, North Carolina 27834
Telephone & TTY: 919-757-6729

LENOIR-RHYNE COLLEGE
Ms. Kathy Whitsell, Director of Services
Services for Hearing Impaired Students
Lenoir-Rhyne College
Box 471
Hickory, North Carolina 28601
Telephone: 704-328-1741

Tennessee

CHATTANOOGA STATE TECHNICAL COMMUNITY COLLEGE
Mrs. Beatrice R. Lyons, Coordinator
Hearing Impaired Program
Chattanooga State Technical Community College
4501 Amnicola Highway
Chattanooga, Tennessee 37406
Telephone & TTY: 615-622-6262, ext. 215

Texas

EASTFIELD COLLEGE
Services for Handicapped Students
Eastfield College
3737 Motley Drive
Mesquite, Texas 75150
Telephone & TTY: 214-7463297

STEPHEN F. AUSTIN STATE UNIVERSITY
Dr. Clyde Iglinsky, Director of Admissions
Department of School Services-Rehabilitation Education Program
Administration Office
Stephen F. Austin State University
Box 3051, SFA
Nacogdoches, Texas 75962
Telephone: 713-569-2504

LEE COLLEGE
David E. Pimentel, Coordinator
Hearing Impaired Project
Lee College
Box 972
Baytown, Texas 77520
Telephone & TTY: 713-427-6531

TARRANT COUNTY JUNIOR COLLEGE
LaTonne DeShazo, Assistant Coordinator
Service Center for Opportunities to Overcome Problems
Tarrant County Junior College, Northeast Campus
828 Harwood
Hurst, Texas 76035
Telephone: 817-281-7860, ext. 333/337
TTY: 817-281-0037

TEXAS STATE TECHNICAL INSTITUTE
Melinda F. McKee, Coordinator
Deaf Student Services
Texas State Technical Institute
Waco, Texas 76705
Telephone: 817-799-3611, ext. 472
TTY: 817-799-3149

HEARING IMPAIRED WORKSHOP EVALUATION FORM

Please respond to the statements below by placing the appropriate number in the blank provided following each statement. Rank your answers by the scale: STRONGLY AGREE-5 AGREE-4 NEUTRAL-3 DISAGREE-2 STRONGLY DISAGREE-1.

1. The workshop was well planned and well organized. _____

   Comments: _____

2. The workshop objectives were clear. _____

   Comments: _____

3. The use of workshop facilitators was appropriate. _____

   Comments: _____

4. The component overviews (Slide/tapes) were interesting and helpful. _____

   Comments: _____

5. The activity groups helped clarify my thinking. _____

   Comments: _____

6. The instruction directed by the facilitators helped introduce each unit. _____

   Comments: _____

7. I found the topical discussions interesting. _____

   Comments: _____

8. I know more about hearing impairments because of this workshop. _____

   Comments: _____

9. I have a better understanding of the needs of hearing impaired students because of this workshop. _____

Comments:_____
_____

10. This workshop has increased my awareness of the vocational needs of the hearing impaired students. _____

Comments:_____
_____

11. I am interested in seeking further information and skills in dealing with the needs of the hearing impaired student. _____

Comments:_____
_____

12. The materials provided will prove helpful to me in the future. _____

Comments:_____
_____

13. Overall, I found the workshop a valuable experience . _____

Comments:_____
_____

14. Additional Comments:_____
_____
_____
_____
_____
_____
_____
_____
_____

APPENDIX F

SLIDE-TAPE SCRIPT

(The following script was developed by Instructional Resources, University of Central Florida from material included in four position papers developed by staff members working on the grant. A complete list of references used in the position papers follows the text of the script.)

INTRODUCTION

Deafness is possibly the most complex of all handicaps, not only affecting the ability to receive and send oral communication, but also touching on literally every aspect of life. For now, let's all go back to a time when we were in high school ourselves ... remember football games, pep rallies, clubs, dances and proms? High school was a time for making plans for the future; determining whether to go to college or to plunge into the work world -- a time for testing our abilities and asserting our individual characters to begin finding our niche in the present and future community. Now think about what high school must be like to a deaf or hearing impaired individual . . .

Deafness alters one's perceptions, knowledge, and understanding of stimuli which serve to shape personality, self-concept, maturity, and interpersonal relationships.

It is important to remember, though, that like their hearing peers, deaf students are first of all, individuals. They are people with emotions, wants, characters, abilities, interests and frailties unique to each person. Like all adolescents, deaf individuals go through the "growing up" pains and the problems that accompany them. Deaf people want to be accepted as individuals first -- individuals who just happen to have a handicap.

To many people, deafness seems to be a simple handicap; deaf people cannot hear. On the other hand, some people often treat the deaf as though they lacked normal intelligence. A hearing impairment can cause a person many social, emotional, and psychological problems. Self-

acceptance, relationships with peers, teachers and counselors, along with being an active part of the "hearing world," become even more demanding, and often times frustrating, as the hearing impaired child reaches adolescence. Frequently, these problems are magnified by the attitudes of others and their lack of knowledge about deafness.

In spite of the problems of deafness, thousands of deaf individuals have overcome the barriers to achieve successful, normal roles in a hearing world.

A beginning step toward helping the hearing impaired student is a thorough knowledge of deafness; its causes and effects. As more and more hearing impaired students are assimilated into public school education, counselors and other guidance personnel will be challenged to use all their skills, knowledge, and insight toward assisting the students in their efforts to overcome the many obstacles to educational and career success which are caused by the nature of deafness and the prejudices of society.

PL. 94-142

Now, let's take just a few moments to look at Public Law 94-142 ... There are in excess of eight million handicapped children in the United States. Prior to September 1, 1978, one half of these students did not receive appropriate educational services; over one million were completely excluded from the public school system. Controversy has always surrounded any federal legislation designed to guarantee the country's children an equal, quality education. The passage of the Education for All Handicapped Children Act of 1975 is one such controversy among the

nation's educators regarding the access to a quality education for all. This act, which is Public Law 94-142, guarantees the educational "civil rights" for all children. It is not a mainstreaming act. The object of the law is to stimulate a movement to develop programs designed to meet the unique educational needs of each individual handicapped student in the least restrictive environment.

Public Law 94-142 assures that all handicapped students will have a free appropriate public education which emphasizes special education and related services designed to meet unique individual needs. The law further assures the protection of the rights of both handicapped students and their parents. This protection is provided through the establishment of national, state and local procedures to monitor the program's effectiveness.

ETIOLOGY - DEVELOPMENT, CAUSES AND TYPES OF HEARING LOSSES

The ear is one of the most complicated organs in the body when studied in detail. For our purposes it will be sufficient to understand it in terms of its main three divisions; the external ear, the middle ear, and the inner ear.

Basically there are three kinds of hearing losses, each of which have a different related speech impairment. Hearing problems are described as conductive, sensory-neural or mixed.

A conductive loss is the most prevalent hearing loss. It occurs in the outer or middle ear. Most of these problems can be remedied by medicine or surgery if treated early. Conductive hearing loss is caused by a disruption in the conduction of sound waves in the outer or middle

ear. The auditory nerve sends signals to the brain and is functional in a conductive hearing loss, but because of some obstruction, sound is not reaching the auditory nerve properly. A conductive hearing loss can be caused by various things including impacted wax, presence of foreign objects, pebbles, rocks, kernal of corn, punctured ear drum, middle ear infection and structural abnormalities. Perhaps the most common cause of damage to the ear canal is the use of instruments such as hair pins or paper clips for purposes of removing wax or just scratching the skin or the canal. Conductive hearing loss is the type of hearing impairment frequently encountered in schools, because much of it is undetected. One of the common mistakes that people make is to assume that a person who speaks softly cannot have a hearing loss. Many people feel that hard of hearing people talk louder than normal hearing people. Surprisingly enough, speaking softly is often a characteristic of someone with a conductive-type hearing loss. A person with a conductive hearing loss hears his own voice with normal intensity by bone conduction, but because of a faulty conductive mechanism, the speech of others is not heard well.

The second type of hearing loss is called sensory-neural. What this means is that the outer ear and middle ear are functioning normally, but there is some impairment of the inner ear or of the auditory nerve. When this happens, the reception, perception and clarity of sounds are impaired. Linguistic, vocal and articulatory problems are associated with a sensory-neural loss so that much of what is heard is not understood. Sounds including consonants such as "S,T,F,P, and CH," may be both omitted from student's speech and from that which is heard.

Students who are not skilled in visual reading or lip reading may have great difficulty understanding speech, especially when the loss is congenital. Usually a severe language impairment is related directly to a severe sensory-neural loss because the damage occured before these students learned language and speech. They have to be taught speech and language through some method other than the auditory canal or hearing sounds.

A third type of hearing loss is a mixed loss, which combines the impairments of both the conductive and nerve loss. The student with a mixed loss will have difficulty receiving sound signals as well as in perceiving those signals which are received.

AMPLIFICATION EQUIPMENT

The main function of auditory amplification is to make speech louder. This prevents us from having to shout at hearing impaired individuals.

Auditory amplification is accomplished through the use of personal hearing aids and auditory trainers. These amplification devices may be used monaurally (amplifying sound to just one ear) or binaurally (amplifying sound to both ears). The fitting and wearing of a monaural or binaural amplification device is dependent upon the severity of the hearing loss and whether one or both ears are involved.

Personal hearing aids and auditory trainers are designed to amplify most efficiently those sounds that fall within the speech frequency range of 500-4000 hz.

There are four types of personal hearing aids. The first type of hearing aid is the body aid. Body aids may be monaural or binaural and are worn attached to the person's clothing with cords running to speaker buttons attached to the ears. Body aids are usually worn by those with severe to profound hearing losses.

The second type is the ear level aid. It is a monaural unit that uses no cords and sits on top and behind the ear. This type is much less visible than the body aid but two separate aids must be worn if binaural amplification is desired. Ear level aids are worn by those with moderate to profound hearing losses.

The third type of hearing aid is the eye glass hearing aid. This is the same as ear level aids, only built into the frame of glasses. Eye glass aids are worn mostly by adults which have the disadvantage of being removed every time the eyeglasses are taken off. Eye glass aids may be used monaurally or binaurally.

The fourth type of hearing aid is the all-at-the-ear. It too is monaural and easily hidden because the entire hearing aid fits into the ear. This type of hearing aid is worn by those having a mild to moderate hearing loss. If binaural amplification is desired, two separate all-at-the-ear aids must be worn.

A more sophisticated type of amplification device is the auditory trainer. They may be permanently installed systems in the classroom that students and teachers plug into, or systems that make use of FM radio signals.

The FM system has the advantage of being mobile, thus giving students and teachers complete freedom of movement inside or outside the classroom.

Hearing aids and auditory trainers have four basic parts: the microphone where sound enters the hearing aid; the amplifier which increases the loudness of sounds picked up by the microphone; the speaker or speaker button which provides the amplified sound directly to the ear; and the battery, which provides the power necessary for amplification.

Auditory amplification systems do not discriminate against sounds whether it be a person's voice or sounds in the environment. Thus, a relatively quiet environment is desirable to achieve maximum effectiveness of these units.

Since batteries are the source of power in both hearing aids and auditory trainers, it is advisable to keep a store of hearing aid batteries and a battery tester on hand. Although auditory trainer batteries are designed to last a long time, a battery charger is necessary to recharge the battery daily.

COMMUNICATION

There are approximately 1.4 million profoundly deaf individuals in this country and approximately 13 million hearing impaired individuals. Studies conducted in the past 2-3 years have disclosed a recognized need and much support for counseling services for deaf or hearing impaired individuals in the public schools.

One of the primary prerequisites of good counseling is good communication. Communication can be defined as an on-going process of sending and receiving messages and feedback by signals or code through channels from sources to receivers. A typical communication model looks something like this.

For example as counselors, let's say you are the source. Your vocal mechanism and/or muscle system is the encoder; the channel may include sign language, finger spelling, oral communication, written language; the receiver is the person you are trying to convey the message to; the decoder is the set of sensory skills of the receiver. In this simplified version of the model, a source encodes a message and places it in a channel so that the message can be decoded by a receiver. However, communication implies much more than a mere exchange of words between individuals. Counseling must include the communication of true thoughts, ideas, and feelings to be effective and beneficial to the client.

Obviously there are problems in communicating with the deaf. The inhibition of language development in deaf students affects far more than their ability to read, write, speak and comprehend. Many deaf people have become particularly attuned to nonverbal messages and respond to their interpretation of those cues more than hearing people do. Deaf students miss the tomes and inflections of the spoken word which many researchers believe contributes more than words of personal development. Mores, habits, values, social maturity, and self confidence are among the many learnings which are developed from day-to-day exposure to the para-verbal and non-verbal accompaniments of the spoken word.

Let's look at some of the ways you can communicate with deaf students. Depending upon a wide variety of circumstances, high school-age deaf students may use one or several methods of communication. Most deaf students will use the spoken word at least some of the time, although many deaf persons are restricted in their use of speech if they were born deaf or became deaf prior to learning how to speak. The

majority of pre-vocationally deaf are poly-modal communicators; that is, in addition to speech, they also communicate through finger spelling ... sign language ... and writing. Although a variety of approaches to communication exists, the current prevailing emphasis is toward "total communication" -- the use of both oral and manual means of communicating. Total communication appears to afford the deaf student the best opportunity to succeed in both the smaller world of the deaf and the larger world of the hearing.

Let's look at some forms of manual communication. Finger spelling is one means of communication. When using finger spelling the hand is held in front of the body at chest level. The palm of the hand faces the client. The letters must be formed distinctly. When finger spelling, try to maintain a fluid motion when moving from letter to letter. Try to visualize words and phrases rather than the individual letters when reading the student's finger spelling. Persons using finger spelling must avoid excessive hand movements. One important thing to remember is not to pretend to understand when you don't. Finger spelling is relatively easy to learn, but it takes a long time to get the message across.

Sign language is the use of manual signs for words, phrases, and concepts. Sign language is usually a much faster way of communicating than finger spelling, although it is more difficult to learn because there are so many different signs. If sign language is the primary form of communication with the deaf student, it may be necessary to use an interpreter in counseling sessions or interviews. The following are some suggestions for facilitating communication when an interpreter is

involved:

1) Whenever possible, follow the student's preference in choice of interpreters. The use of parents or other close relatives frequently inhibits communication in counseling sessions and should be avoided when feasible.

2) Seat everyone within comfortable visual range of each other, but place the student closest to you, the counselor or teacher, to reinforce your primary interest in him or her and always remember to address the student directly.

3) Request the interpreter to wait until you have completed your statements before attracting the attention of the student.

4) Request that the interpreter verbalize what is being signed.

5) Never develop, or allow the interpreter to initiate, side conversations about the student in his or her presence.

Some deaf persons read and write exceptionally well, although the majority read at a fifth grade level or below. Even though written communication is slow and sometimes it may be hard to establish rapport, it is more easily understood to some extent by the majority of deaf students. It is important to avoid the usage of idiomatic and colloquial analogies, language, and complex abstractions. Words such as 'run' that have multiple meanings need to be clarified. Always attempt to get at the thought behind the words rather than the words themselves.

Many deaf students are adept at lip reading. One point that should be stressed however, is that deaf persons who do lip read only comprehend about 45% of what is being said. It may be necessary to supplement speech reading with some other form of communication.

Here you can see a list of suggestions to aid in the communication process of lip reading. Let's take a look at these more closely.

1) Avoid strong backlighting. Keep the light in front of you.

2) Speak naturally. Exaggerated speech distorts mouth movements.

3) No smoking or chewing gum. This makes lip reading very difficult.

4) If the student had difficulty understanding you, rephrase instead of repeating.

5) Make sure paper and pencils are near at hand.

6) Use any aids such as objects, people, or events at hand to help the student understand.

When counseling with a client, the student can often understand you, but his speech may be unintelligible to you. You may benefit from the following suggestions:

1) Do not pretend to understand when you do not. Use paper and pencil for clarification.

2) Allow the student to talk uninterrupted for several minutes to help you become familiar with his speech.

IMPLICATIONS FOR LEARNING

By the time a child reaches school age, the educational implications of deafness come into the foreground and continue to be of importance throughout the period of school life. Despite good potential success, many deaf students show poor achievement. Some problems which might trigger poor achievement are lack of success in speech and language, failure of school subjects, poor study habits and lack of reading skills.

The average deaf person reaches adulthood grossly undereducated despite his normal potential for language development and abstract thought. The results of several findings indicate: 30% of deaf children leave school at age 16 or older functionally illiterate; 60% leave high school having achieved a fifth grade or below reading level; and only 5% attain 10th grade level.

The low achievement levels pose insurmountable obstacles for most of the hearing impaired children. The following are a few of the areas hearing impaired children have trouble comprehending.

Developing abstract language skills is one of the most difficult communication skills. The terms "perfect," "important," and "forever" cannot be directly experienced and so require a high level of abstraction for understanding. A deaf child has trouble understanding these terms with his limited achievement level.

Multiple meanings of words may cause problems. Take the word "run." A clock runs; a political candidate "runs" for office; an athlete "runs" in a race. A deaf child has trouble reasoning how the same word can be used in many different contexts. When using words with multiple meanings, you must be careful to correctly convey the particular meaning you want the student to comprehend.

Language deficiences surface in the written language of the hearing impaired student. This is due in part to the less precise vocabulary of the defective hearing. Studies show that the hearing impaired individual is often confused by the fundamentals of sentence structure, since the natural order has not been developed through auditory channels. "Garden me planted" from a hearing impaired child might mean, "I planted

a garden."

Hearing impairment affects learning in all academic areas. Areas that rely on reading skills and language concepts are the most seriously affected. Understanding science, social studies, and math depends on reading skills and comprehension.

There are specific teaching situations that a teacher should be aware of when there is a hearing impaired student in the classroom. For example, if a teacher instructs from the front of the classroom as well as from the back -- this causes added problems for the student, who has specifically sat in the front of the class to hear better, or to try to speech read. A teacher who walks around the room, or a teacher who talks, while facing the chalkboard as she writes creates barriers. Additionally, a teacher creates problems with exaggerated mouth movements, mumbling or covering her mouth. A teacher should also be aware that when she stands in front of a window while talking she creates a poor condition for consistent speech reading because of the glare.

It would all become easier for the student and teacher if the student is placed in a seat where he is comfortable and can see the teacher adequat ley.

For the next few minutes, let's look at some helpful hints a teacher can use to aid in the teaching of a hearing impaired child.

Visual aids should be used whenever possible. The overhead projector, opaque projector, the blackboard, maps, charts, and captioned filmstrips are all very useful in getting ideas across.

Use words in sentences. Often, the only way the hearing impaired student can determine which word is being spoken is by the context of the sentence.

Write assignments, new vocabulary, key words and phrases on the blackboard. This will help the student to follow the lesson more easily.

Get the student's attention when you speak. Tapping loudly on a desk or lecturn or waving your hand will help. In a group discussion, have the speaker point to the next person to talk. If an interpreter is present, he or she will do this. The main purpose is to ensure that the hearing impaired student knows the visual or auditory source of information.

When a class discussion is taking place, help direct the hearing impaired student's attention to the person talking with a gesture or by calling a name.

Encourage the student to speak and participate with the class. The more you listen to him/her the easier it will be to understand the student.

Make sure the student understands. Do not accept a nod or smile as an indication of understanding. For example, ask the student content questions rather than yes or no questions. Be aware of any vocabulary limitations or difficulties with English idioms.

Encourage development of communication skills, such as speech, speech reading, finger spelling and manual communication. Also encourage the use of any residual hearing the student may possess. Your committee for the handicapped can help with needed resources. Encourage the student to ask questions by developing a non-threatening atmosphere in which the hearing impaired student does not feel embarrassed by what he or she perceives as inappropriate questions.

Explain to the class about hearing impairment and hearing aids.

A buddy can be helpful to the hearing impaired student. They can take notes by using carbon paper during discussions or movies; help the

student follow along during oral reading; alert the student to page numbers and assignments; tell the student about a message coming over the intercom.

Some beneficial attitudes for the teacher of the hearing impaired student in a regular classroom to have are: do not feel sorry for the hearing impaired student. Pity and sympathy will not help them to learn to cope in our society.

Expect the same behavior, promptness and cooperation that you expect of the normal hearing students.

Do not overprotect the hearing impaired student.

Responsibilities and duties should be shared by the whole class, including the hearing impaired student.

Have a positive and loving attitude toward your hearing impaired student, the same as you would for any student in your class.

VOCATIONAL IMPLICATIONS

Have you ever thought about the types of jobs a deaf person is unqualified for? Telephone operator, stenographer, and many professional-type jobs. Did you know that the majority of deaf individuals work in printing jobs? Others are employed as factory workers, home economists, and many work in food service.

As you heard in the previous statement, deaf people are unqualified for certain types of jobs -- but there are many jobs hearing impaired people are qualified for that they aren't aware of. Let's see why.

In terms of vocational planning, hearing impaired students need to acquire occupational information, establish professional goals, and

further their occupational aspirations. Many deaf students are unaware of the broad range of vocational opportunities available to them and tend to stereotype jobs by sex and hearing ability.

Schools for the deaf and self-contained classes within public schools have frequently excluded comprehensive career education programs. Additionally, occupational information is often extremely limited for deaf students.

As a result of the lack of career information and the stereo-typical views regarding the inaccessibility of many vocations, deaf students usually have much lower career aspirations than their hearing peers. The job requirements in many areas of work that could previously be met by a good trade or technical program now require much broader based competence in English, math, and science. Schools for the deaf exclude comprehensive career education due to the cost and bleak employment outlook. So even when the intellectual capacity and academic achievement is high, many hearing impaired students settle for manual trade jobs.

To help this situation, guidance programs in high schools need to be developed to direct the students' attention toward the goals and objectives of adult life. Through group and individual guidance activities counselors can provide opportunities for hearing impaired students to practice independent thinking and behavior, focusing on self-examination and career planning. Two development programs which have been field tested and used extensively with the hearing impaired are: "Career Insights and Self Awareness," published by Houghton Mifflin, and "The Step Method: Learning and Practicing Thinking Skills," by the Psychology Corporation.

The most difficult problem faced by deaf students entering the world of work is the initial interview and its accompanying requirements.

Practice, simulation games, role-playing and systematic instruction can help the hearing impaired student learn how to obtain the job he or she wants.

Students should be given practice in completing various types of application forms and in developing resumes. Standardized and other forms of testing which frequently accompany job interviews can cause anxiety in deaf students. Practice in test taking can alleviate some problems. Hearing impaired students can greatly benefit from role-playing interviews. They should learn to rely on written and/or oral communication methods and should be discouraged from using interpreters in interviews. Role-playing and other simulation techniques can accomplish more than improving job seeking behaviors. They can also serve to increase self-confidence so that the hearing impaired person seeking employment can present himself or herself as self-assured and self-sufficient to potential employers.

TESTING IMPLICATIONS

Educational testing for high school aged students is often a complex, multi-faceted issue for educators to confront. Testing for intelligence, achievement, general aptitudes and interests can be tremendously beneficial in assisting the student in identifying potentially fulfilling careers. However, when testing hearing impaired individuals, it may be difficult because the content and instructions for many tests are highly verbal. Consequently, they may tend to

measure language deficiencies more than they evaluate factors such as intelligence or aptitude. Highly verbal tests should be avoided except when the student's language skills are good or when the test is designed to measure achievement in language or reading. Additional matters which may concern educators are "What is the most effective test available for the student's needs?"; "How can I be sure that the results are an accurate predictor of student ability?"; and "Where can I get information on effective test interpretation methods?"

Test administrators are encouraged to follow these five suggestions when testing hearing impaired students:

1) Give several practice items to assure understanding of the test procedure.

2) Administer an easier or less involved test first in order to reduce anxiety.

3) Test in several short blocks of time rather than in concentrated periods.

4) Administer tests individually rather in groups, and

5) Face the student so that the lips and hands are not shadowed.

Let's now look at some tests which can be used with severely impaired students. The counselor is cautioned that most tests have not been standardized for deaf students and that formal testing procedures should always be accompanied by more personal means of assessment.

Intelligence Tests

The Chicago Non-verbal Test includes verbal or pantomimed directions from age eight to adult. Norms are designed for people with a language handicap and this test is useful for screening.

The Huskey-Nebraska Test of Learning Aptitude involves deaf and hearing norms to age 17. The test requires no verbal response.

The Leiter (Lighter) International Performance Scale is useful for the hearing impaired age 2-18. The test can be administered without using language or pantomime.

Finally, there is the Wechsler Adult Intelligence Scale and the Wechsler Intelligence Scale for Children. The performance scale of both instruments is considered one of the most accurate instruments for assessing intelligence of deaf students. The Wechsler Intelligence Scale for Children has been standardized for the deaf population.

In addition to intelligence tests, the Stanford Achievement Test measures academic achievement and the level at which the student is working.

The Flanagan Aptitude Test is considered a good predictor of potential vocational success if administered individually. This test measures verbal reasoning, numerical ability, abstract reasoning, space relations, mechanical reasoning, language usage, and clerical aptitude.

Many deaf students are given a modified general aptitude test battery score near or above the general mean of most aptitudes.

The last category of tests we want to look at is interest and there are four tests we want to briefly look at.

1) The Career Assessment Inventory. This is geared toward careers not requiring advanced degrees.

2) The Career Ability Placement Survey measures the abilities required for entry requirements into a majority of jobs in fourteen occupational clusters.

3) and 4) The Kudor Occupational Interest Survey (Form D) as well

as the Strong-Campbell Interest Inventory Test is considered too highly verbal for many deaf students. For this particular test, at least a sixth grade reading ability is required.

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